

APPENDIX D

Summary of Third Quarter 2009 Soil Vapor Sampling Results

**SUMMARY OF THIRD QUARTER 2009
SOIL VAPOR SAMPLING RESULTS**

This appendix presents a summary of the soil vapor sampling conducted at the Poway Landfill and surrounding property on 28 July 2009. The soil vapor survey was conducted in general accordance with the January 2003 California Department of Toxic Substances Control (DTSC) advisory. In June 2009 the DTSC indicated the holding time for soil vapor samples would be extended from 72 hours to 14 days. Therefore, a 14 day hold time was utilized for this sampling event. The laboratory data were validated by Geosyntec personnel. Based on the validation, the data were determined to be usable as qualified.

FIELD PROCEDURES

As discussed with the San Diego County, Department of Environmental Health, Local Enforcement Agency (LEA), in a meeting on 7 January 2009 the number of soil vapor monitoring wells to be sampled was reduced from 10 onsite and 22 offsite soil vapor wells to 4 onsite and 4 offsite soil vapor wells. Routine soil vapor monitoring has been performed at the site since April 2006. Although the estimated risk to human health based on soil vapor data collected from the site since April 2006 are below levels of concern according to the DTSC, San Diego County Department of Environmental Health (DEH), and the United States Environmental Protection Agency (USEPA) [Geosyntec, 2006], the LEA has requested the County continue monitoring on- and off-site soil vapor concentrations to further evaluate potential seasonal variations.

Four onsite (PVP-1A, PVP-2A, PVP-4A, and PVP-5) and four offsite (VW-3A, VW-4A, VW-5A, and VW-8A) were purged and sampled on 28 July 2009 using methods consistent with the previous sampling events. An attempt to purge and sample onsite soil vapor well PVP-3A was also made on 28 July 2009. During purging of PVP-3A the tracer gas was detected in the purge volume and again in the purge volume after fittings were tightened, therefore a soil vapor sample was not collected from PVP-3A. Soil vapor samples were collected using laboratory-calibrated and certified clean flow controllers set at flow rates of approximately 167 ml/min. Soil vapor sample collection logs are provided in Attachment D-1.

ANALYTICAL RESULTS

The following VOCs are indicators of LFG migration or have previously accounted for the greatest portion of the estimated risk and therefore, comprise the primary constituents of concern (COCs):

- Dichlorodifluoromethane (DCDFM or Freon 12)
- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis-1,2-Dichloroethene (cis-1,2-DCE)
- Vinyl chloride
- Benzene
- Ethylbenzene
- Toluene
- Xylenes

Certificates of analysis and chain-of-custody documents are presented in Attachment D-2. A summary of soil vapor analytical results for the July 2009 monitoring event, including QA/QC sample results, are provided in Table D-1. Reported concentrations of benzene, PCE, and TCE in soil vapor samples collected onsite and offsite at the Poway Landfill from April 2006 through July 2009 are summarized in Table D-2.

Background Soil Vapor Wells

Soil vapor samples collected from background soil vapor well PVP-5 during the July 2009 event did not contain COCs at concentrations greater than their respective reporting limits (RLs).

Fixed gases were measured in the field using a Landtech GEM 2000 landfill gas meter and recorded on the soil vapor sample collection logs (Attachment D-1). Fixed gas concentrations in the soil vapor purged from the background soil vapor wells were consistent with native soil vapor and those measured during the previous sampling events [Geosyntec, 2008a].

Property Boundary Soil Vapor Wells

Soil vapor samples collected from soil vapor wells along the southern property boundary during the July 2009 sampling event contained the following COCs:

- DCDFM at concentrations ranging from 5.2 to 55 ppbv (3 of 3 samples);
- PCE at concentrations of 2.0 and 2.3 ppbv (2 of 3 samples);
- Ethylbenzene at a concentration of 14 ppbv (1 of 3 samples);
- m,p-Xylene at a concentration of 19 ppbv (1 of 3 samples); and

- o-Xylene at a concentration of 8.2 ppbv (1 of 3 samples).

No other COCs were detected at concentrations greater than their respective RLs.

Fixed gas concentrations in the soil vapor purged from the onsite soil vapor wells along the south property boundary were consistent with native soil vapor and those measured during previous sampling events [Geosyntec, 2008a].

Offsite Soil Vapor Wells

Soil vapor samples collected from soil vapor wells offsite within the residential area south of the site during the July 2009 sampling event contained the following COCs:

- DCDFM at a concentration of 1.6 ppbv (2 of 5 samples);
- PCE at concentrations ranging from 8.7 to 51 ppbv (3 of 5 samples);
- TCE at a concentration of 3.2 ppbv (1 of 5 samples);
- Benzene at a concentration of 2.0 ppbv (1 of 5 samples);
- Ethylbenzene at a concentration of 1.3 ppbv (1 of 5 samples);
- m,p-Xylene at concentrations of 3.0 and 6.9 ppbv (2 of 5 samples);
- o-Xylene at concentrations of 1.4 and 2.6 ppbv (2 of 5 samples); and
- Toluene at concentrations of 1.5 and 3.4 ppbv (2 of 5 samples).

No other COCs were detected at concentrations greater than their respective RLs.

Fixed gas concentrations in the soil vapor purged from the offsite soil vapor wells within the residential area south of the site were consistent with native soil vapor and those measured during the previous sampling events [Geosyntec, 2008a].

Discussion of Soil Vapor Data

VOC concentrations in soil vapor samples collected from onsite and offsite soil vapor wells on 28 July 2009 were generally consistent with the range of concentrations observed during previous sampling events [Geosyntec, 2008a]. PCE and TCE concentrations have generally remained within the range of historic concentrations in onsite and offsite soil vapor wells since the April and May 2006 monitoring events. The concentrations of PCE reported in primary sample VW-5A and the associated field duplicate VW-5C are qualified as estimated values due to a relative percent difference between the two samples greater than 40% (Table D-1).

Additionally, the concentration of PCE detected in field duplicate sample VW-5C is inconsistent with historical trends and values for samples collected from VW-5A. Concentrations of PCE and TCE were also detected at concentrations similar to those reported for VW-5C in the ambient air sample (QCFB); therefore, it appears that the PCE or TCE concentrations detected in VW-5C may not be attributable to the site. Fuel related compounds detected in the soil vapor samples collected from PVP-2A and VW-4A have generally not previously been detected in samples collected from these vapor wells.

Onsite and offsite soil vapor fixed gas concentrations were generally consistent with native soil vapor concentrations. Time series plots for benzene, PCE, and TCE in onsite and offsite soil vapor are provided in Attachment D-3.

CONCLUSIONS

The estimated risk calculated from the April and May 2006 vapor data were below levels of concern according to DTSC, DEH, and USEPA. Additionally, the concentrations observed during the July 2009 sampling event were consistent with or lower than concentrations observed during the April and May 2006 sampling events. Therefore, the estimated risk based on the July 2009 vapor data can be reasonably expected to be consistent with or less than estimated risk from the April and May 2006 sampling events. Although fuel related VOCs were detected in samples collected from onsite soil vapor well PVP-2A and offsite soil vapor well VW-4A, the detected compounds are generally not consistent with historical results and may be attributable to additional off-site sources. Additionally, the concentrations of fuel related VOCs detected in onsite (PVP-2A) and offsite (VW-4A) soil vapor were below California Human Health Screening Levels (CHHSLs) for a residential land use scenario. The significance of the detections of fuel related VOCs in shallow soil vapor will be further evaluated in future monitoring events.

Tables

- Table D-1 Summary of Soil Vapor Analytical Results
Table D-2 Summary of Historical Benzene, PCE, and TCE Concentrations in Soil Vapor

Figures

- Figure D-1 Soil Vapor Sample Locations
Figure D-2 Benzene Concentrations in Soil Vapor July 2009
Figure D-3 PCE Concentrations in Soil Vapor July 2009
Figure D-4 TCE Concentrations in Soil Vapor July 2009

Attachments

- Attachment D-1 Soil Vapor Sample Collection Logs
Attachment D-2 Soil Vapor Laboratory Analytical Certificates
Attachment D-3 Soil Vapor Time Series Plots

TABLES

Table D-1
Summary of Soil Vapor Laboratory Analytical Results
Poway Landfill
Poway, California

Units	Onsite Soil Vapor Wells					Offsite Soil Vapor Wells				QA/QC Samples	
	PVP-1A	PVP-2A	PVP-4A	PVP-5	VW-3A	VW-4A	VW-5A	VW-5C*	VW-8A	QCFB	QCTB
	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009	7/28/2009

VOCs by Modified EPA Method TO-15¹

1,2,4-Trimethylbenzene	ppbv	ND<1.3	ND<1.3	ND<1.3	ND<1.2	ND<1.3	3.5	ND<1.3	ND<1.3	3.4	ND<1.3	ND<0.50
2-Butanone (Methyl Ethyl Ketone)	ppbv	24	13	19	6.5	2.5	3.9	ND<1.3	1.6 J	1.6	ND<1.3	ND<0.50
4-Ethyltoluene	ppbv	ND<1.3	ND<1.3	ND<1.3	ND<1.2	ND<1.3	2.4	ND<1.3	ND<1.3	1.7	ND<1.3	ND<0.50
Acetone	ppbv	39	26	27	14	19	24	ND<5.3	ND<5.2	6.0	ND<5.1	ND<2.0
Benzene	ppbv	ND<1.3	ND<1.3	ND<1.3	ND<1.2	ND<1.3	2.0	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
Carbon Disulfide	ppbv	ND<1.3	2.9	ND<1.3	ND<1.2	1.8	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
Chloroform	ppbv	ND<1.3	ND<1.3	46	25	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
Chloromethane	ppbv	UJ	ND<5.1	UJ	UJ	UJ	ND<5.3	UJ	UJ	UJ	UJ	UJ
Ethanol	ppbv	ND<5.4	8.8	ND<5.4	ND<4.9	9.4	8.0	ND<5.3	ND<5.2	ND<5.1	ND<5.1	ND<2.0
Ethyl Benzene	ppbv	ND<1.3	14	ND<1.3	ND<1.2	ND<1.3	1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
Freon 113	ppbv	4.3	140	ND<1.3	ND<1.2	ND<1.3	ND<1.3	1.5	1.6	ND<1.3	ND<1.3	ND<0.50
Freon 114	ppbv	ND<1.3	6.1	ND<1.3	ND<1.2	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
Freon 12	ppbv	5.2	55	12	ND<1.2	ND<1.3	1.6	ND<1.3	1.6 J	ND<1.3	ND<1.3	ND<0.50
m,p-Xylene	ppbv	ND<1.3	19	ND<1.3	ND<1.2	ND<1.3	6.9	ND<1.3	ND<1.3	3.0	ND<1.3	ND<0.50
Methylene Chloride	ppbv	ND<1.3	ND<1.3	4.6	2.9	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<1.3	ND<0.50
o-Xylene	ppbv	ND<1.3	8.2	ND<1.3	ND<1.2	ND<1.3	2.6	ND<1.3	ND<1.3	1.4	ND<1.3	ND<0.50
Tetrachloroethene	ppbv	ND<1.3	2.0	2.3	ND<1.2	ND<1.3	30	8.7 J	51 J	ND<1.3	25	ND<0.50
Tetrahydrofuran	ppbv	ND<1.3	ND<1.3	16	5.2	ND<1.3	ND<1.3	ND<1.3	1.9 J	ND<1.3	ND<1.3	ND<0.50
Toluene	ppbv	ND<1.3	ND<1.3	ND<1.3	ND<1.2	ND<1.3	3.4	ND<1.3	ND<1.3	1.5	ND<1.3	ND<0.50
Trichloroethene	ppbv	ND<1.3	ND<1.3	ND<1.3	ND<1.2	ND<1.3	ND<1.3	ND<1.3	3.2 J	ND<1.3	2.4	ND<0.50

ppbv - parts per billion by volume

ND - Analyte not detected at a concentration greater than the detection limit

VOCs - Volatile Organic Compounds

* - Duplicate sample for VW-5A labeled VW-5C

¹ - Other VOCs were not detected at concentrations greater than their respective detection limits

UJ - Non-detected compound associated with low bias in the CCV (continuing calibration verification)

J - Estimated value, greater than 40% relative percent difference between primary and duplicate sample

Table D-2
Summary of Historical Benzene, PCE, and TCE Concentrations in Soil Vapor
Poway Landfill
Poway, California

Onsite Soil Vapor Wells				
Sample ID	Date	Benzene	TCE	PCE
		ppbv	ppbv	ppbv
Background Soil Vapor Wells				
PVP-5	4/19/2006	ND<1.3	ND<1.3	ND<1.3
	5/8/2006	ND<1.1	ND<1.1	1.2
	7/24/2006	ND<1.1	ND<1.1	ND<1.1
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
	7/23/2007	ND<1.0	ND<1.0	ND<1.0
	4/21/2008	ND<1.1	ND<1.1	ND<1.1
	1/27/2009	ND<1.2	ND<1.2	ND<1.2
	7/2/2009	ND<1.2	ND<1.2	ND<1.2
Refuse Soil Vapor Wells				
PVP-7A	4/6/2006	100	19	ND<4.7
PVP-8	4/6/2006	130	36	18
PVP-9	4/6/2006	180	37	27
PVP-10A	4/6/2006	140	19	ND<4.8
Soil Vapor Wells Underlying Refuse				
PVP-7B	4/6/2006	87	10	3.3
PVP-10B	4/6/2006	120	23	5.0

Table D-2
Summary of Historical Benzene, PCE, and TCE Concentrations in Soil Vapor
Poway Landfill
Poway, California

Sample ID	Date	Benzene	TCE	PCE
		ppbv	ppbv	ppbv
Property Boundary Soil Vapor Wells				
PVP-1	2/2/2006 ¹	120	ND<7.8	ND<7.8
	2/14/2006 ¹	140	ND<9.2	ND<9.2
PVP-1D	2/2/2006*	150	ND<3.1	ND<3.1
PVP-1A	4/19/2006	ND<1.3	ND<1.3	1.8
	5/8/2006	ND<1.3	ND<1.3	2.1
	7/24/2006	ND<1.3	ND<1.3	2.9
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
	7/23/2007	ND<1.3	ND<1.3	ND<1.3
	4/21/2008	ND<1.2	ND<1.2	1.5
	1/27/2009	6.8	ND<1.2	ND<1.2
	7/28/2009	ND<1.3	ND<1.3	ND<1.3
PVP-2A-R	2/14/2006 ¹	9.5	ND<1.1	3.9
PVP-2AD-R	2/14/2006*	8.6	ND<2.4	4.2
PVP-2A	2/2/2006	19	ND<1.2	ND<1.2
	2/14/2006 ¹	11	5.2	ND<4.7
	5/8/2006	ND<1.1	ND<1.1	3.6
	7/24/2006	ND<1.2	ND<1.2	3.4
	1/22/2007	ND<1.1	ND<1.1	2.5
	7/23/2007	3.8	ND<1.2	ND<1.2
	4/21/2008	ND<1.2	ND<1.2	1.8
	1/27/2009	ND<1.2	ND<1.2	1.2
PVP-2B-R	2/14/2006 ¹	100	ND<32	ND<32
PVP-2B	2/2/2006 ¹	ND<1.1	ND<1.1	ND<1.1
	2/14/2006	ND<2.3	ND<2.3	ND<2.3
	5/8/2006 ¹	3.0	ND<3.0	ND<3.0
PVP-3A	2/2/2006	36	ND<1.2	ND<1.2
	2/14/2006 ¹	26	ND<1.2	ND<1.2
	4/19/2006	1.4	ND<1.3	ND<1.3
	4/19/2006*	5.4	ND<1.1	5.4
	5/8/2006	1.5	ND<1.2	4.2
	5/8/2006*	1.3	ND<1.2	1.4
	7/24/2006	ND<1.2	ND<1.2	1.2
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
PVP-3B	1/22/2007*	ND<1.1	ND<1.1	1.1
	7/23/2007	ND<1.2	ND<1.2	ND<1.2
	2/2/2006	58	ND<6.2	ND<6.2
	2/14/2006	92	ND<4.8	ND<4.8
PVP-4A	4/19/2006	6.2	ND<1.2	5.6
	5/8/2006	7.0	ND<1.3	3.8
	4/20/2006	ND<1.1	ND<1.1	3.2
	5/8/2006	ND<1.2	ND<1.2	3.4
	7/24/2006	ND<1.2	ND<1.2	4.0
PVP-4B	1/22/2007	ND<1.2	ND<1.2	2.2
	7/23/2007	ND<1.2	ND<1.2	3.8
	7/23/2007*	ND<1.3	ND<1.3	3.8
	4/21/2008	ND<1.2	ND<1.2	1.9
	4/21/2008*	ND<1.2	ND<1.2	1.8
	1/27/2009	ND<1.2	ND<1.2	ND<1.2
	1/24/2009	ND<1.1	ND<1.1	ND<1.1
	7/28/2009	ND<1.3	ND<1.3	2.3
PVP-4B	5/8/2006 ¹	ND<370	ND<370	ND<370

Table D-2
Summary of Historical Benzene, PCE, and TCE Concentrations in Soil Vapor
Poway Landfill
Poway, California

Sample ID	Date	Benzene	TCE	PCE
		ppbv	ppbv	ppbv
100 feet from Property Boundary				
VW-1A	4/20/2006	ND<4.9	ND<4.9	ND<4.9
	5/8/2006	ND<1.2	ND<1.2	ND<1.2
	7/24/2006	ND<1.2	ND<1.2	ND<1.2
	7/24/2006*	1.5	ND<1.2	ND<1.2
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
	7/24/2007	ND<1.3	ND<1.3	ND<1.3
	4/21/2008	ND<1.3	ND<1.3	ND<1.3
VW-1B	4/20/2006	2.9	ND<1.2	3.3
	5/9/2006	ND<1.2	ND<1.2	3.3
	7/24/2006	ND<1.2	ND<1.2	1.6
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
	7/23/2007	ND<1.3	ND<1.3	ND<1.3
VW-2A	4/20/2006	5.9	ND<1.1	4.1
	4/20/2006*	6.5	ND<1.2	4.1
	5/9/2006	1.2	ND<1.2	2.5
	7/25/2006	ND<1.3	ND<1.3	ND<1.3
	1/22/2007	ND<1.1	ND<1.1	ND<1.1
VW-2B	7/23/2007	ND<1.2	ND<1.2	ND<1.2
	5/11/2006 ¹	ND<220	ND<220	ND<220
VW-3A	4/20/2006	ND<1.1	ND<1.1	ND<1.1
	5/9/2006	ND<1.2	ND<1.2	ND<1.2
	7/24/2006	ND<1.2	ND<1.2	ND<1.2
	1/23/2007	ND<1.0	ND<1.0	ND<1.0
	7/24/2007	ND<1.2	ND<1.2	ND<1.2
	7/24/2007*	ND<1.2	ND<1.2	ND<1.2
	4/21/2008	ND<1.2	ND<1.2	ND<1.2
	1/27/2009	ND<1.2	ND<1.2	ND<1.2
VW-3B	7/28/2009	ND<1.3	ND<1.3	ND<1.3
	5/11/2006 ¹	ND<81	ND<81	ND<81
VW-4A	4/24/2006	ND<1.2	ND<1.2	51
	5/9/2006	ND<1.2	ND<1.2	59
	5/9/2006*	ND<1.1	ND<1.1	49
	7/25/2006	ND<1.2	ND<1.2	73
	1/22/2007	ND<1.1	ND<1.1	9.6
	7/23/2007	ND<1.1	ND<1.1	62
	4/21/2008	ND<1.2	ND<1.2	36
	1/27/2009	ND<1.2	ND<1.2	15
VW-4B	7/28/2009	2.0	ND<1.3	30
	4/24/2006	6.0	ND<1.1	62
	5/9/2006	2.4	1.5	88
	7/25/2006	ND<1.3	ND<1.3	69
	1/22/2007	ND<1.2	ND<1.2	60
VW-5A	7/23/2007	ND<1.2	ND<1.2	69
	5/9/2006	ND<1.2	1.8	19
	7/24/2006	ND<1.2	ND<1.2	20
	1/23/2007	ND<1.1	ND<1.1	8.2
	7/24/2007	ND<1.1	ND<1.1	23
	4/21/2008	1.2	ND<1.2	10
	1/27/2009	4.4	ND<1.2	3.9
VW-5B	7/28/2009	ND<1.3	ND<1.3	8.7
	5/11/2006 ¹	ND<19	ND<19	ND<19
VW-6A	5/10/2006	3.8	ND<1.2	6.2
	7/24/2006	ND<1.3	ND<1.3	3.1
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
VW-6B	5/11/2006 ¹	ND<10	ND<10	11
	4/24/2006	2.6	19	3.7
VW-7A	4/24/2006*	2.6	19	3.6
	5/10/2006	2.2	5.6	2.0
	7/25/2006	ND<1.2	ND<1.2	2.6
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
	7/24/2007	ND<1.2	ND<1.2	ND<1.2
	4/22/2008	ND<1.2	ND<1.2	ND<1.2

Table D-2
Summary of Historical Benzene, PCE, and TCE Concentrations in Soil Vapor
Poway Landfill
Poway, California

Offsite Permanent Soil Vapor Wells				
Sample ID	Date	Benzene	TCE	PCE
		ppbv	ppbv	ppbv
300 feet from Property Boundary				
VW-8A	4/24/2006	ND<1.1	3.7	2.1
	5/9/2006	ND<1.2	2.8	2.2
	7/25/2006	ND<1.2	ND<1.2	2.8
	7/25/2006*	ND<1.2	ND<1.2	3
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
	1/23/2007*	ND<1.1	ND<1.1	ND<1.1
	7/24/2007	ND<1.2	ND<1.2	1.9
	1/27/2009	ND<1.1	1.2	1.3
VW-8B	7/28/2009	ND<1.3	ND<1.3	ND<1.3
	4/25/2006	ND<1.1	ND<1.1	1.7
	5/9/2006	ND<1.1	ND<1.1	1.9
	7/25/2006	ND<1.1	ND<1.1	1.9
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
VW-9	7/24/2007	ND<1.2	ND<1.2	1.4
	5/11/2006 ¹	ND<150	ND<150	ND<150
VW-10	4/25/2006	ND<1.1	ND<1.1	ND<1.1
	4/25/2006*	ND<1.2	ND<1.2	ND<1.2
	5/10/2006	2.5	ND<1.1	ND<1.1
	7/25/2006	ND<1.2	ND<1.2	ND<1.2
	1/23/2007	1.3	ND<1.1	ND<1.1
	7/24/2007	ND<1.2	ND<1.2	ND<1.2
	4/22/2008	3.0	ND<1.2	ND<1.2
	1000 feet from Property Boundary			
VW-11	4/25/2006	1.5	ND<1.1	ND<1.1
	5/10/2006	1.8	ND<1.1	ND<1.1
	5/10/2006*	ND<1.1	ND<1.1	1.3
	7/25/2006	ND<1.2	ND<1.2	ND<1.2
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
	7/24/2007	ND<1.3	ND<1.3	ND<1.3
	4/22/2008	4.9	ND<1.1	4.3
VW-12	5/10/2006	ND<1.2	ND<1.2	4.3
	6/1/2006	ND<1.1	ND<1.1	6.7
	6/1/2006*	ND<1.2	ND<1.2	6.7
	7/25/2006	ND<1.2	ND<1.2	9.3
	1/23/2007	ND<1.2	ND<1.2	3.6
	7/24/2007	ND<1.1	ND<1.1	9.2
	4/22/2008	ND<1.2	ND<1.2	ND<1.2
	4/22/2008*	ND<1.1	ND<1.1	2.9 J
VW-13	5/10/2006	5.0	4.2	2.6
	6/1/2006	ND<1.3	2.4	5.3
	7/25/2006	ND<1.3	ND<1.3	2.8
	1/23/2007	ND<1.2	ND<1.2	ND<1.2
	7/24/2007	ND<1.3	ND<1.3	ND<1.3
	4/22/2008	ND<1.1	ND<1.1	ND<1.1
VW-14	5/10/2006	3.7	3.5	1.4
	6/1/2006	ND<1.3	4.0	1.5
	7/25/2006	ND<1.3	ND<1.3	ND<1.3
	1/23/2007	ND<1.1	ND<1.1	ND<1.1
	7/24/2007	ND<1.2	ND<1.2	ND<1.2
	4/22/2008	ND<1.2	ND<1.2	ND<1.2

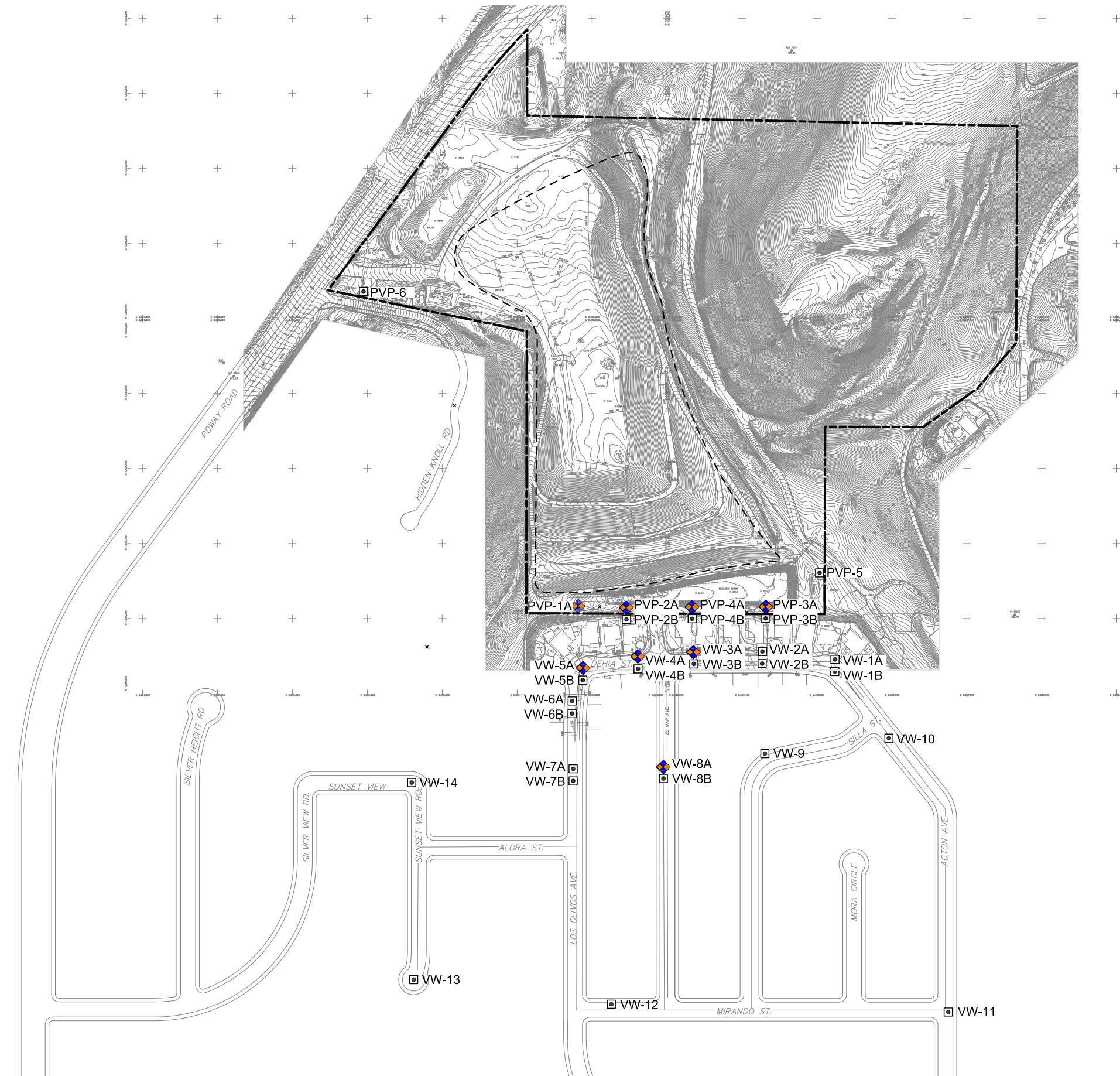
ppbv -parts per billion by volume

* Duplicate sample collected at vapor well

¹ - Tracer gas breakthrough in soil vapor well

J - Estimated concentration greater than or equal to the method detection limit, but less than the reporting limit

FIGURES



LEGEND

- SOIL VAPOR WELL
- SENTINEL SOIL VAPOR WELL
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE TRASH/REFUSE BOUNDARY
- EXISTING PAVED ROAD
- EXISTING DIRT ROAD

NOTE:

A SOIL VAPOR SAMPLE COULD NOT BE COLLECTED FROM ONSITE SOIL VAPOR WELL PVP-3A DURING THE THIRD QUARTER 2009 SOIL VAPOR SAMPLING EVENT. THEREFORE A SOIL VAPOR SAMPLE WAS COLLECTED FROM ONSITE SENTINEL SOIL VAPOR WELL PVP-5.

 Scale (In Feet)
Soil Vapor Sampling Locations
Poway Landfill Poway, California

Geosyntec consultants







ATTACHMENT D-1

Soil Vapor Sample Collection Logs



CALIBRATION LOG FOR AIR SAMPLING

-- Not Applicable

SOIL GAS PROBE MEASUREMENTS

Project Name: Poway Landfill
 Project Number: SCD233
 Phase Number: 16-01
 Date: 7/26/09 Weather: Sunny
 Field Personnel: Dave Skippin, C Lieder
 Tracer Gas: He

Probe #: PVP-1A
 PID Model #: NA
 PID Serial #: NA
 Landtech GEM 2000 Landfill Gas Meter Serial #: B7160
 Helium detector (model and serial number) B6131
 Air Temperature _____ Atm. Pressure _____ (in Hg)

Field tubing blank (ppmv)	NA	Time	NA	Initial Pressure/Vacuum (prior to pumping)	0	Time	11:10
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Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
NA	0.2	NA
NA	0.5	NA
NA	1	NA

Subsurface type	<input type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume
Surface thickness:	_____ in/cm	<input type="checkbox"/> unknown			□ Sub-slab <0.1 L Soil gas probe (L)

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
11:15	11:21	6	3	0.107	1	4	0	3	17.1	40	80	21.0	79.9 BAL
11:23	11:30	7	3	0.167	1	2	—	—	—	40	80	—	SAMPLE
11:31	11:37	6	3	0.107	1	2	0	2.9	18.6	40	80	21.0	78.2 BAL

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
11:23-11:30 am	PVP-1A	PVP-1A	2044	-27.64	-4.21

Comments

SOIL GAS PROBE MEASUREMENTS

Geosyntec ▶
consultants

engineers | scientists | innovators
10875 Ranch Bernardo Road, Suite 200
San Diego, Ca. 92127
858.674.6559 fax 858.674.6586

Project Name: Poway Landfill
Project Number: SCO 233
Phase Number: 16-01
Date: 7/28/09 Weather: Sunny
Field Personnel: Chris Lieder, Dave Skippin
Tracer Gas: He

Probe #: PVP-2A Lamp: 10.6 / 11.7 eV
PID Model #: NA
PID Serial #: NA
Landtech GEM 2000 Landfill Gas Meter Serial #: B7160
Helium detector (model and serial number) B6131
Air Temperature _____ Atm. Pressure _____ (in Hg)

Field tubing blank (ppmv)	-	Time	10:00	Initial Pressure/Vacuum (prior to pumping)	0	Time	10:00
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Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
	0.2	
	0.5	
	1	

Subsurface type	<input type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume
Surface thickness:	_____ in/cm	<input type="checkbox"/> unknown			□ Sub-slab <0.1 L Soil gas probe (L)

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
10:04	10:10	6	3	0.167	1	1	0	2.1	19	40	80	<1.0	-
10:14	10:23	9	3	0.167	1	1	0	1.8	18.6	40	80	-	-
10:26	10:32	6	3	0.167	1	1	0	1.8	18.6	40	80	<1.0	78.9 Bal.
													Sample
													79.4 Bal.

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
10:14 10:23	PVP-2A	pvp-2A	35560	-29.02	-3.87

Comments

SOIL GAS PROBE MEASUREMENTS

Geosyntec ▶
consultants

engineers | scientists | innovators
10875 Ranch Bernardo Road, Suite 200
San Diego, Ca. 92127
858.674.6559 fax 858.674.6586

Project Name: Poway Landfill
Project Number: S10233
Phase Number: 16-01
Date: 7/08/09 Weather: sunny
Field Personnel: Dave Skippin, Chris Lieder
Tracer Gas: He

Probe #: PVP-3A
PID Model #: NA
PID Serial #: NA
Landtech GEM 2000 Landfill Gas Meter Serial #: B7160
Helium detector (model and serial number) B60131
Air Temperature: — Atm. Pressure: — (in Hg)

Field tubing blank (ppmv)	NA	Time	NA	Initial Pressure/Vacuum (prior to pumping)		Time	
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Subsurface type	<input type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume		
Surface thickness:	in/cm		<input type="checkbox"/> unknown		□ Sub-slab <0.1 L		

Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
	0.2	
	0.5	
	1	

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
13:33	13:40	7	3	0.167	1	10	8	8	14.5	40	80	25%	—
13:54	14:01	7	3	0.167	1	40	8	8	16.5	40	80	16%	—
													8514BAL
													8314BAL

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
—	PVP-3A can	PVP-3A off	31769 64	28169 65	—

Comments No sample collected, Helium detected during purging.

SOIL GAS PROBE MEASUREMENTS

Project Name: Poway Landfill
 Project Number: 820833
 Phase Number:
 Date: 7/28/09 Weather: Sunny
 Field Personnel: Dane Skogren, Chris Lester
 Tracer Gas: He

Probe # pvp-4A
 PID Model # NA
 PID Serial # NA
 Landtech GEM 2000 Landfill Gas Meter Serial # R6131 BT160
 Helium detector (model and serial number) R6131
 Air Temperature _____ Atm. Pressure _____ (in Hg)

Field tubing blank (ppmv)	<u>NA</u>	Time	<u>NA</u>	Initial Pressure/Vacuum (prior to pumping)	<u>0</u>	Time	
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Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
	0.2	
<u>NA</u>	0.5	<u>NA</u>
	1	

Subsurface type	<input type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume		
Surface thickness:	in/cm		<input type="checkbox"/> unknown	Sub-slab <0.1 L			Soil gas probe (L)

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
14:20	14:28	6	3	0.167	1	0.15	0.1	1.0	18.9	40	80	~1.0	
14:31	14:38	7	—	0.167	—	0.15	—	—	—	40	80	—	
14:40	14:46	6	3	0.167	1	0.15	0.0	0.8	19.0	40	80		

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
14:31	pvp-4A	pvp-4A	36570	-28.78	-51.79

Comments

79.8 BAL
Sample
79.9

SOIL GAS PROBE MEASUREMENTS

Project Name: Poway Landfill
 Project Number: SCD 233
 Phase Number:
 Date: 7/26/09 Weather: Sunny
 Field Personnel: Chris Lieder, Dave Skipper
 Tracer Gas: He

Probe # PVP-5
 PID Model # NA
 PID Serial # NA
 Landtech GEM 2000 Landfill Gas Meter Serial # R 7160
 Helium detector (model and serial number) R 6131
 Air Temperature _____ Atm. Pressure _____ (in Hg)

Field tubing blank (ppmv)	<u>NA</u>	Time	<u>NA</u>	Initial Pressure/Vacuum (prior to pumping)	<u>0</u>	Time	<u>15:12</u>
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Subsurface type	<input type="checkbox"/> Asphalt	<input checked="" type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume
Surface thickness:	_____ in/cm	<input type="checkbox"/> unknown			<input type="checkbox"/> Sub-slab <0.1 L

(ie. asphalt or concrete surface)

Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
	0.2	
<u>NA</u>	0.5	
	1	<u>NA</u>

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
15:17	15:23	6	3	0.167	1	0.07	0	0.3	19.8	40	80	21.0	79.8 BAL
15:25	15:33	8	3	0.167	1	0.07	—	—	—	40	80	—	Sample
15:35	15:41	6	3	0.167	1	0.07	0	0.2	19.9	40	80	21.0	79.7 BAL

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
15:25	PVP-5	PVP-5	36478	-28.75	-31.60
15:25	PVP-5	QCFB	31769	-28.69	-41.08

Comments collected Field Blanks (QCFB @ 15:25)

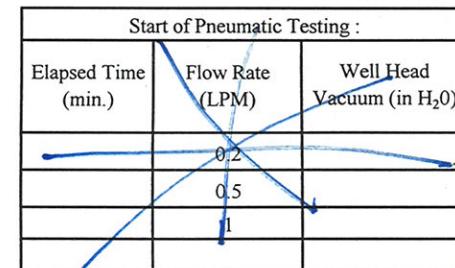
SOIL GAS PROBE MEASUREMENTS

Project Name: Paway Landfill
 Project Number: SC0233
 Phase Number: 17-01
 Date: 7/28/09 Weather: Sunny 87
 Field Personnel: S. Andrus, S. McCarthy
 Tracer Gas: He

Probe #: VW-3A Lamp: 10.6 / 11.7 eV
 PID Model #: N.A.
 PID Serial #: N.A.
 Landtech GEM 2000 Landfill Gas Meter Serial #: PS087
 Helium detector (model and serial number) Dielectric # R9586
 Air Temperature 87 Atm. Pressure _____ (in Hg)

Field tubing blank (ppmv)	NA	Time	NA	Initial Pressure/Vacuum (prior to pumping)	0	Time	1006
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Subsurface type	<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume		
Surface thickness:	<u>6 "</u>	in/cm	<input type="checkbox"/> unknown	<input type="checkbox"/> Sub-slab <0.1 L Soil gas probe (L)			



Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCS by PID (ppmv)
										min	max	Sample	
1013	1020	7	3	.167	1	.03	0	5.1	15.8	30	70	<1%	78.1
1024	1030	6	1	.167	1	.04	-	-	-	30	72	-	-
1032	1035	3	3	.167	.5	.04	-	-	-	30	76	<1%	-

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
1024	VW-3A	VW-3A	36504	-30	-60

Comments	Vacuum ✓ ok.
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SOIL GAS PROBE MEASUREMENTS

Project Name: Poway Landfill
 Project Number: SC0233
 Phase Number: 17-01
 Date: 7/28/07 Weather: Sunny 87°
 Field Personnel: S. McCarthy, S. Andrus
 Tracer Gas: He

Probe #: VW 4A Lamp: 10.6 / 11.7 eV
 PID Model #: N.A.
 PID Serial #: N.A.
 Landtech GEM 2000 Landfill Gas Meter Serial #: R5087
 Helium detector (model and serial number) Dipolec # R9586
 Air Temperature 87 Atm. Pressure — (in Hg)

Field tubing blank (ppmv)	<u>N.A.</u>	Time	<u>N.A.</u>	Initial Pressure/Vacuum (prior to pumping)	<u>0</u>	Time	<u>113</u>
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Subsurface type	<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume	
Surface thickness:	<u>6"</u> in/cm	<input type="checkbox"/> unknown		<input type="checkbox"/> Sub-slab <0.1 L		Soil gas probe (L)

Elapsed Time (min.)	Start of Pneumatic Testing :	
	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
0.2		
0.5		
1		

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
1115	1124	9	3	.167	1	0.4	0	7.1	13.6	30	65	<17.	79.2
1127	1135	8	1	.167	1	0.6	—	—	—	30	71	—	—
1136	1140	4	3	.167	.4	0.4	—	—	—	30	60	<	—

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
1127	VW-4A	VW-4A	36510	-30	-3.0

Comments	Vacuum Jok
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SOIL GAS PROBE MEASUREMENTS

Project Name: Poway Landfill II
 Project Number: SC-0233
 Phase Number: P-01
 Date: 7/28/09 Weather: Sunny 87
 Field Personnel: J. McCarthy, S. Andrus
 Tracer Gas: He

Probe #: VW-SA Lamp: 10.6 / 11.7 eV
 PID Model #: N.A.
 PID Serial #: N.A.
 Landtech GEM 2000 Landfill Gas Meter Serial #: R5087
 Helium detector (model and serial number) Dielectric #R9586
 Air Temperature 87 Atm. Pressure — (in Hg)

Field tubing blank (ppmv)	<u>N.A.</u>	Time	<u>N.A.</u>	Initial Pressure/Vacuum (prior to pumping)	<u>0</u>	Time	<u>(335)</u>
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Subsurface type	<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume		
Surface thickness:	<u>6"</u> in/cm	<input type="checkbox"/> unknown			□ Sub-slab <0.1 L		

(ie. asphalt or concrete surface)

Start of Pneumatic Testing :		
Elapsed Time (min.)	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
0.2		
0.5		
1		

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
1339	1347	8	3	.167	1	0.5	0.1	2.0	17.2	30	72	<17.	80.7
1350	1404	14	1	.167	1	0.8	—	—	—	30	62	—	—
1405	1409	4	3	.167	0.5	0.5	—	—	—				

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
1350	VW-SA	VW-SA	35647	-30	-5.0
1350	VW-SA-C	VW-SA-C	2102	-30	-5.0

Comments Vacuum vol

SOIL GAS PROBE MEASUREMENTS

Project Name: Rivay Landfill
 Project Number: SC-b233
 Phase Number: 17-01
 Date: 7/29/09 Weather: Sunny 87
 Field Personnel: S. McCarthy, S. Andrus
 Tracer Gas: He

Probe # VW-8A Lamp: 10.6 / 11.7 eV
 PID Model # N.A.
 PID Serial # N.A.
 Landtech GEM 2000 Landfill Gas Meter Serial # 25087
 Helium detector (model and serial number) Dielectric #Z9586
 Air Temperature 87 Atm. Pressure - (in Hg)

Field tubing blank (ppmv)	<u>N.A.</u>	Time	<u>N.A.</u>	Initial Pressure/Vacuum (prior to pumping)	<u>0</u>	Time	<u>1458</u>
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Subsurface type	<input checked="" type="checkbox"/> Asphalt	<input type="checkbox"/> Concrete	<input type="checkbox"/> Grass	<input type="checkbox"/> Other	1 Casing Volume		
Surface thickness:	<u>6"</u> in/cm	<input type="checkbox"/> unknown			□ Sub-slab <0.1 L		

(ie. asphalt or concrete surface)

Elapsed Time (min.)	Start of Pneumatic Testing :	
	Flow Rate (LPM)	Well Head Vacuum (in H ₂ O)
	0.2	
	0.5	
	1	

Start Time	End Time	Elapsed Time (min)	Bag Volume (L)	Purge Rate (LPM)	Total Vol (L)	Well Head Vacuum (in H ₂ O)	CH4 (%)	CO2 (%)	O2 (%)	Tracer Gas (%)			VOCs by PID (ppmv)
										min	max	Sample	
1500	1511	11	3	.167	1	0.16	0.4	0.2	18.6	30	69	<1.0	80.7
1513	1519	6	1	.167	1	0.10	—	—	—	30	82	—	—
1520	1525	5	3	.167	.4	0.16	—	—	—	30	70	<1.0	—

Time	Location	Sample ID	Summa Canister ID	Initial Vacuum (in Hg)	Final Vacuum (in Hg)
1513	VW-8A	VW 8A	30818	-30	-5.0

Comments	Vacuum ok
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Balence
2)

ATTACHMENT D-2

**Soil Vapor Laboratory
Analytical Certificates**

Data Validation – Poway Landfill
28 July 2009

Level II data packages were received in the Geosyntec-San Diego, Ca office in August 2009, for data validation. The data were received from Air Toxics Ltd., Folsom, California. The following documents were referenced with regard to performing this data validation; USEPA National Functional Guidelines for Organic Data Review, as well as the pertinent Methods referenced by the data package. The data review process provides information on the analytical limitations of data based on specified quality control (QC) criteria. The data are discussed by Work Order number and analytical test as follows:

WO# 0907622

Results were reported for the following samples:

<u>Client ID</u>	<u>Laboratory ID</u>
PVP-1A	0907622-01A
PVP-2A	0907622-02A
PVP-4A	0907622-03A
PVP-5	0907622-04A
QCTB	0907622-05A
QCFB	0907622-06A
VW-3A	0907622-07A
VW-4A	0907622-08A
VW-8A	0907622-09A
VW-8A Duplicate	0907622-09AA
VW-5A	0907622-10A
VW-5C	0907622-11A

Matrix: Gaseous

All regulatory and technical holding times were met.

EPA Method TO-15 (Modified) – Volatile Organic Compounds

Duplicate results for sample VW-5A and its associated field duplicate (VW-5C) were outside of the acceptable range for relative percent difference (RPD) for tetrachloroethene (142%) and ethanol (non-detect in lab duplicate). The result for this compound in VW-5A is “J” qualified as estimated. Positive results for Freon 12, 2-butanone, tetrahydrofuran, and trichloroethene detected in sample VW-5C were not detected in field duplicate VW-5A. Results for this compound in VW-5A are “J” qualified as estimated.

Positive results were detected in the field blank (QCFB). Due to this, elevated reporting limits were reported for the following constituents: trichloroethene (VW-5C); and tetrachloroethene (PVP-2A, PVP-4A, VW-4A, VW-5A, and VW-5C).

Chloromethane was below recovery limits in the continuing calibration verification (CCV). The following samples were “UJ” qualified as estimated: PVP-1A, PVP-4A, PVP-5, QCTB, QCFB, VW-3A, VW-4A, VW-8A, and VW-5C.

Summary

The data packages were reviewed. Based on the information provided, all of the results are acceptable for use as qualified.

Reviewer: Shana McCarthy
Geosyntec Consultants
10 August 2009

8/17/2009

Mr. Chris Gale
GeoSyntec Consultants
10875 Rancho Bernardo Road
Suite 200
San Diego CA 92127

Project Name: Poway

Project #: SC0233

Workorder #: 0907622R1

Dear Mr. Chris Gale

The following report includes the data for the above referenced project for sample(s) received on 7/29/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kyle Vagadori
Project Manager

WORK ORDER #: **0907622R1**

Work Order Summary

CLIENT:	Mr. Chris Gale GeoSyntec Consultants 10875 Rancho Bernardo Road Suite 200 San Diego, CA 92127	BILL TO:	Mr. Chris Gale GeoSyntec Consultants 10875 Rancho Bernardo Road Suite 200 San Diego, CA 92127
PHONE:	858-674-6559 X215	P.O. #	
FAX:	858-674-6586	PROJECT #	SC0233 Poway
DATE RECEIVED:	07/29/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	08/17/2009		
DATE REISSUED:	08/17/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	PVP-1A	Modified TO-15	7.5 "Hg	15 psi
02A	PVP-2A	Modified TO-15	6.0 "Hg	15 psi
03A	PVP-4A	Modified TO-15	7.5 "Hg	15 psi
04A	PVP-5	Modified TO-15	5.5 "Hg	15 psi
05A	QCTB	Modified TO-15	28.0 "Hg	15 psi
06A	QCFB	Modified TO-15	6.0 "Hg	15 psi
07A	VW-3A	Modified TO-15	7.5 "Hg	15 psi
08A	VW-4A	Modified TO-15	6.0 "Hg	15 psi
09A	VW-8A	Modified TO-15	6.0 "Hg	15 psi
09AA	VW-8A Lab Duplicate	Modified TO-15	6.0 "Hg	15 psi
10A	VW-5A	Modified TO-15	7.0 "Hg	15 psi
11A	VW-5C	Modified TO-15	6.5 "Hg	15 psi
12A	Lab Blank	Modified TO-15	NA	NA
12B	Lab Blank	Modified TO-15	NA	NA
12C	Lab Blank	Modified TO-15	NA	NA
13A	CCV	Modified TO-15	NA	NA
13B	CCV	Modified TO-15	NA	NA

Continued on next page

WORK ORDER #: **0907622R1**

Work Order Summary

CLIENT:	Mr. Chris Gale GeoSyntec Consultants 10875 Rancho Bernardo Road Suite 200 San Diego, CA 92127	BILL TO:	Mr. Chris Gale GeoSyntec Consultants 10875 Rancho Bernardo Road Suite 200 San Diego, CA 92127
PHONE:	858-674-6559 X215	P.O. #	
FAX:	858-674-6586	PROJECT #	SC0233 Poway
DATE RECEIVED:	07/29/2009	CONTACT:	Kyle Vagadori
DATE COMPLETED:	08/17/2009		
DATE REISSUED:	08/17/2009		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
13C	CCV	Modified TO-15	NA	NA
14A	LCS	Modified TO-15	NA	NA
14B	LCS	Modified TO-15	NA	NA
14C	LCS	Modified TO-15	NA	NA

CERTIFIED BY:



DATE: 08/17/09

Laboratory Director

Certification numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/10

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

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**LABORATORY NARRATIVE
Modified TO-15
GeoSyntec Consultants
Workorder# 0907622R1**

Eleven 1 Liter Summa Canister (100% Certified) samples were received on July 29, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	TO-15	ATL Modifications
Daily CCV	</= 30% Difference	</= 30% Difference; Compounds exceeding this criterion and associated data are flagged and narrated.
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

Receiving Notes

The Chain of Custody (COC) information for sample VW-4A did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

Analytical Notes

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

THE WORKORDER WAS REISSUED ON 8/17/09 TO REMOVE THE REPORTED RESULTS FOR SPECIFIC ANALYTES THAT WERE TENTATIVELY IDENTIFIED COMPOUNDS (TICS). A PREVIOUS NARRATIVE HAS ALSO BEEN REMOVED BECAUSE IT IS NO LONGER APPLICABLE.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: PVP-1A

Lab ID#: 0907622R1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	5.2	6.6	26
Freon 113	1.3	4.3	10	33
Acetone	5.4	39	13	94
2-Butanone (Methyl Ethyl Ketone)	1.3	24	4.0	71

Client Sample ID: PVP-2A

Lab ID#: 0907622R1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	55	6.2	270
Freon 114	1.3	6.1	8.8	43
Ethanol	5.1	8.8	9.5	17
Freon 113	1.3	140	9.7	1100
Acetone	5.1	26	12	61
Carbon Disulfide	1.3	2.9	3.9	8.9
2-Butanone (Methyl Ethyl Ketone)	1.3	13	3.7	38
Tetrachloroethene	1.3	2.0	8.6	14
Ethyl Benzene	1.3	14	5.5	59
m,p-Xylene	1.3	19	5.5	84
o-Xylene	1.3	8.2	5.5	35

Client Sample ID: PVP-4A

Lab ID#: 0907622R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	12	6.6	57
Acetone	5.4	27	13	63
Methylene Chloride	1.3	4.6	4.7	16
2-Butanone (Methyl Ethyl Ketone)	1.3	19	4.0	55
Tetrahydrofuran	1.3	16	4.0	48
Chloroform	1.3	46	6.6	220
Tetrachloroethene	1.3	2.3	9.1	16

Client Sample ID: PVP-5

Lab ID#: 0907622R1-04A



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: PVP-5

Lab ID#: 0907622R1-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	4.9	14	12	32
Methylene Chloride	1.2	2.9	4.3	10
2-Butanone (Methyl Ethyl Ketone)	1.2	6.5	3.6	19
Tetrahydrofuran	1.2	5.2	3.6	15
Chloroform	1.2	25	6.0	120

Client Sample ID: QCTB

Lab ID#: 0907622R1-05A

No Detections Were Found.

Client Sample ID: QCFB

Lab ID#: 0907622R1-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.3	2.4	6.8	13
Tetrachloroethene	1.3	25	8.6	170

Client Sample ID: VW-3A

Lab ID#: 0907622R1-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	5.4	9.4	10	18
Acetone	5.4	19	13	45
Carbon Disulfide	1.3	1.8	4.2	5.6
2-Butanone (Methyl Ethyl Ketone)	1.3	2.5	4.0	7.4

Client Sample ID: VW-4A

Lab ID#: 0907622R1-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	1.6	6.2	7.7
Ethanol	5.1	8.0	9.5	15
Acetone	5.1	24	12	58
2-Butanone (Methyl Ethyl Ketone)	1.3	3.9	3.7	11



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VW-4A

Lab ID#: 0907622R1-08A

Benzene	1.3	2.0	4.0	6.3
Toluene	1.3	3.4	4.8	13
Tetrachloroethene	1.3	30	8.6	200
Ethyl Benzene	1.3	1.3	5.5	5.7
m,p-Xylene	1.3	6.9	5.5	30
o-Xylene	1.3	2.6	5.5	11
4-Ethyltoluene	1.3	2.4	6.2	12
1,2,4-Trimethylbenzene	1.3	3.5	6.2	17

Client Sample ID: VW-8A

Lab ID#: 0907622R1-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	5.1	6.0	12	14
2-Butanone (Methyl Ethyl Ketone)	1.3	1.6	3.7	4.8
Toluene	1.3	1.5	4.8	5.8
m,p-Xylene	1.3	3.0	5.5	13
o-Xylene	1.3	1.4	5.5	6.1
4-Ethyltoluene	1.3	1.7	6.2	8.2
1,2,4-Trimethylbenzene	1.3	3.4	6.2	17

Client Sample ID: VW-8A Lab Duplicate

Lab ID#: 0907622R1-09AA

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Acetone	5.1	5.1	12	12
2-Butanone (Methyl Ethyl Ketone)	1.3	1.4	3.7	4.1
Toluene	1.3	1.3	4.8	4.9
m,p-Xylene	1.3	2.6	5.5	12
o-Xylene	1.3	1.3	5.5	5.6
4-Ethyltoluene	1.3	1.5	6.2	7.3
1,2,4-Trimethylbenzene	1.3	3.1	6.2	15

Client Sample ID: VW-5A

Lab ID#: 0907622R1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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Summary of Detected Compounds

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: VW-5A

Lab ID#: 0907622R1-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 113	1.3	1.5	10	12
Tetrachloroethene	1.3	8.7	9.0	59

Client Sample ID: VW-5C

Lab ID#: 0907622R1-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	1.6	6.4	8.0
Freon 113	1.3	1.6	9.9	12
2-Butanone (Methyl Ethyl Ketone)	1.3	1.6	3.8	4.8
Tetrahydrofuran	1.3	1.9	3.8	5.5
Trichloroethene	1.3	3.2	6.9	17
Tetrachloroethene	1.3	51	8.8	350



Client Sample ID: PVP-1A

Lab ID#: 0907622R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080412	Date of Collection:	7/28/09 11:23:00 AM	
Dil. Factor:	2.69	Date of Analysis:	8/4/09 05:35 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	5.2	6.6	26
Freon 114	1.3	Not Detected	9.4	Not Detected
Chloromethane	5.4	Not Detected U J	11	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	3.0	Not Detected
Bromomethane	1.3	Not Detected	5.2	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.6	Not Detected
Ethanol	5.4	Not Detected	10	Not Detected
Freon 113	1.3	4.3	10	33
1,1-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Acetone	5.4	39	13	94
2-Propanol	5.4	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.2	Not Detected
3-Chloropropene	5.4	Not Detected	17	Not Detected
Methylene Chloride	1.3	Not Detected	4.7	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Hexane	1.3	Not Detected	4.7	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	24	4.0	71
cis-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Tetrahydrofuran	1.3	Not Detected	4.0	Not Detected
Chloroform	1.3	Not Detected	6.6	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Cyclohexane	1.3	Not Detected	4.6	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.5	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.3	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Heptane	1.3	Not Detected	5.5	Not Detected
Trichloroethene	1.3	Not Detected	7.2	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.2	Not Detected
1,4-Dioxane	5.4	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	9.0	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.5	Not Detected
Toluene	1.3	Not Detected	5.1	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected



Client Sample ID: PVP-1A

Lab ID#: 0907622R1-01A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080412	Date of Collection:	7/28/09 11:23:00 AM	
Dil. Factor:	2.69	Date of Analysis:	8/4/09 05:35 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	Not Detected	9.1	Not Detected
2-Hexanone	5.4	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.2	Not Detected
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected
Styrene	1.3	Not Detected	5.7	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.6	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.2	Not Detected
Propylbenzene	1.3	Not Detected	6.6	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.6	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	7.0	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,2,4-Trichlorobenzene	5.4	Not Detected	40	Not Detected
Hexachlorobutadiene	5.4	Not Detected	57	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: PVP-2A

Lab ID#: 0907622R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080419	Date of Collection: 7/28/09 10:14:00 AM		
Dil. Factor:	2.53	Date of Analysis: 8/4/09 09:27 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	55	6.2	270
Freon 114	1.3	6.1	8.8	43
Chloromethane	5.1	Not Detected	10	Not Detected
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	8.8	9.5	17
Freon 113	1.3	140	9.7	1100
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	26	12	61
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	2.9	3.9	8.9
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	13	3.7	38
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected



Client Sample ID: PVP-2A

Lab ID#: 0907622R1-02A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080419	Date of Collection:	7/28/09 10:14:00 AM	
Dil. Factor:	2.53	Date of Analysis:	8/4/09 09:27 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethylene	1.3	2.0	8.6	14
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	14	5.5	59
m,p-Xylene	1.3	19	5.5	84
o-Xylene	1.3	8.2	5.5	35
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.2	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: PVP-4A

Lab ID#: 0907622R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080414	Date of Collection: 7/28/09 2:31:00 PM		
Dil. Factor:	2.69	Date of Analysis: 8/4/09 06:52 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	12	6.6	57
Freon 114	1.3	Not Detected	9.4	Not Detected
Chloromethane	5.4	Not Detected U J	11	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	3.0	Not Detected
Bromomethane	1.3	Not Detected	5.2	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.6	Not Detected
Ethanol	5.4	Not Detected	10	Not Detected
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethylene	1.3	Not Detected	5.3	Not Detected
Acetone	5.4	27	13	63
2-Propanol	5.4	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.2	Not Detected
3-Chloropropene	5.4	Not Detected	17	Not Detected
Methylene Chloride	1.3	4.6	4.7	16
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethylene	1.3	Not Detected	5.3	Not Detected
Hexane	1.3	Not Detected	4.7	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	19	4.0	55
cis-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Tetrahydrofuran	1.3	16	4.0	48
Chloroform	1.3	46	6.6	220
1,1,1-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Cyclohexane	1.3	Not Detected	4.6	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.5	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.3	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Heptane	1.3	Not Detected	5.5	Not Detected
Trichloroethylene	1.3	Not Detected	7.2	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.2	Not Detected
1,4-Dioxane	5.4	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	9.0	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.5	Not Detected
Toluene	1.3	Not Detected	5.1	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected



Client Sample ID: PVP-4A

Lab ID#: 0907622R1-03A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080414	Date of Collection: 7/28/09 2:31:00 PM		
Dil. Factor:	2.69	Date of Analysis: 8/4/09 06:52 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	2.3	9.1	16
2-Hexanone	5.4	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.2	Not Detected
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected
Styrene	1.3	Not Detected	5.7	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.6	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.2	Not Detected
Propylbenzene	1.3	Not Detected	6.6	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.6	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	7.0	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,2,4-Trichlorobenzene	5.4	Not Detected	40	Not Detected
Hexachlorobutadiene	5.4	Not Detected	57	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: PVP-5

Lab ID#: 0907622R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080415	Date of Collection: 7/28/09 3:25:00 PM		
Dil. Factor:	2.47	Date of Analysis: 8/4/09 07:41 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.1	Not Detected
Freon 114	1.2	Not Detected	8.6	Not Detected
Chloromethane	4.9	Not Detected U J	10	Not Detected U J
Vinyl Chloride	1.2	Not Detected	3.2	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	1.2	Not Detected	4.8	Not Detected
Chloroethane	1.2	Not Detected	3.2	Not Detected
Freon 11	1.2	Not Detected	6.9	Not Detected
Ethanol	4.9	Not Detected	9.3	Not Detected
Freon 113	1.2	Not Detected	9.5	Not Detected
1,1-Dichloroethylene	1.2	Not Detected	4.9	Not Detected
Acetone	4.9	14	12	32
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	1.2	Not Detected	3.8	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	1.2	2.9	4.3	10
Methyl tert-butyl ether	1.2	Not Detected	4.4	Not Detected
trans-1,2-Dichloroethylene	1.2	Not Detected	4.9	Not Detected
Hexane	1.2	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.2	Not Detected	5.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.2	6.5	3.6	19
cis-1,2-Dichloroethene	1.2	Not Detected	4.9	Not Detected
Tetrahydrofuran	1.2	5.2	3.6	15
Chloroform	1.2	25	6.0	120
1,1,1-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.8	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.8	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	5.0	Not Detected
Heptane	1.2	Not Detected	5.1	Not Detected
Trichloroethylene	1.2	Not Detected	6.6	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.7	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.3	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.6	Not Detected



Client Sample ID: PVP-5

Lab ID#: 0907622R1-04A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080415	Date of Collection: 7/28/09 3:25:00 PM		
Dil. Factor:	2.47	Date of Analysis: 8/4/09 07:41 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.2	Not Detected	6.7	Not Detected
Tetrachloroethene	1.2	Not Detected	8.4	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected
Dibromochloromethane	1.2	Not Detected	10	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.2	Not Detected	9.5	Not Detected
Chlorobenzene	1.2	Not Detected	5.7	Not Detected
Ethyl Benzene	1.2	Not Detected	5.4	Not Detected
m,p-Xylene	1.2	Not Detected	5.4	Not Detected
o-Xylene	1.2	Not Detected	5.4	Not Detected
Styrene	1.2	Not Detected	5.3	Not Detected
Bromoform	1.2	Not Detected	13	Not Detected
Cumene	1.2	Not Detected	6.1	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.5	Not Detected
Propylbenzene	1.2	Not Detected	6.1	Not Detected
<u>4-Ethyltoluene</u>	1.2	Not Detected	6.1	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.1	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
<u>alpha-Chlorotoluene</u>	1.2	Not Detected	6.4	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.4	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	37	Not Detected
Hexachlorobutadiene	4.9	Not Detected	53	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: QCTB

Lab ID#: 0907622R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080416	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 08:20 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected U J	4.1	Not Detected U J
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethylene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



Client Sample ID: QCTB

Lab ID#: 0907622R1-05A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080416	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 08:20 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	101	70-130



Client Sample ID: QCFB

Lab ID#: 0907622R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080418	Date of Collection: 7/28/09 3:25:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/4/09 10:34 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected U J	10	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	Not Detected	12	Not Detected
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.7	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	2.4	6.8	13
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected



Client Sample ID: QCFB

Lab ID#: 0907622R1-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080418	Date of Collection: 7/28/09 3:25:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/4/09 10:34 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	25	8.6	170
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	Not Detected	5.5	Not Detected
o-Xylene	1.3	Not Detected	5.5	Not Detected
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.2	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: VW-3A

Lab ID#: 0907622R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080419	Date of Collection: 7/28/09 10:24:00 AM		
Dil. Factor:	2.69	Date of Analysis: 8/4/09 11:16 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.6	Not Detected
Freon 114	1.3	Not Detected	9.4	Not Detected
Chloromethane	5.4	Not Detected U J	11	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	3.0	Not Detected
Bromomethane	1.3	Not Detected	5.2	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.6	Not Detected
Ethanol	5.4	9.4	10	18
Freon 113	1.3	Not Detected	10	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Acetone	5.4	19	13	45
2-Propanol	5.4	Not Detected	13	Not Detected
Carbon Disulfide	1.3	1.8	4.2	5.6
3-Chloropropene	5.4	Not Detected	17	Not Detected
Methylene Chloride	1.3	Not Detected	4.7	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Hexane	1.3	Not Detected	4.7	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	2.5	4.0	7.4
cis-1,2-Dichloroethene	1.3	Not Detected	5.3	Not Detected
Tetrahydrofuran	1.3	Not Detected	4.0	Not Detected
Chloroform	1.3	Not Detected	6.6	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Cyclohexane	1.3	Not Detected	4.6	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.5	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.3	Not Detected
Benzene	1.3	Not Detected	4.3	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.4	Not Detected
Heptane	1.3	Not Detected	5.5	Not Detected
Trichloroethene	1.3	Not Detected	7.2	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.2	Not Detected
1,4-Dioxane	5.4	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	9.0	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.5	Not Detected
Toluene	1.3	Not Detected	5.1	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	6.1	Not Detected



Client Sample ID: VW-3A

Lab ID#: 0907622R1-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080419	Date of Collection:	7/28/09 10:24:00 AM	
Dil. Factor:	2.69	Date of Analysis:	8/4/09 11:16 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.3	Not Detected
Tetrachloroethene	1.3	Not Detected	9.1	Not Detected
2-Hexanone	5.4	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.2	Not Detected
Ethyl Benzene	1.3	Not Detected	5.8	Not Detected
m,p-Xylene	1.3	Not Detected	5.8	Not Detected
o-Xylene	1.3	Not Detected	5.8	Not Detected
Styrene	1.3	Not Detected	5.7	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.6	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.2	Not Detected
Propylbenzene	1.3	Not Detected	6.6	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.6	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.6	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	7.0	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	8.1	Not Detected
1,2,4-Trichlorobenzene	5.4	Not Detected	40	Not Detected
Hexachlorobutadiene	5.4	Not Detected	57	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: VW-4A

Lab ID#: 0907622R1-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080420	Date of Collection: 7/28/09 11:27:00 AM		
Dil. Factor:	2.53	Date of Analysis: 8/4/09 11:55 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	1.6	6.2	7.7
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected U J	10	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	8.0	9.5	15
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	24	12	58
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	3.9	3.7	11
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	2.0	4.0	6.3
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	3.4	4.8	13
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected



Client Sample ID: VW-4A

Lab ID#: 0907622R1-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080420	Date of Collection:	7/28/09 11:27:00 AM	
Dil. Factor:	2.53	Date of Analysis:	8/4/09 11:55 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	30	8.6	200
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	1.3	5.5	5.7
m,p-Xylene	1.3	6.9	5.5	30
o-Xylene	1.3	2.6	5.5	11
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
<u>4-Ethyltoluene</u>	1.3	2.4	6.2	12
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	3.5	6.2	17
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: VW-8A

Lab ID#: 0907622R1-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080421	Date of Collection: 7/28/09 3:13:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/5/09 12:33 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected U J	10	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	6.0	12	14
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	1.6	3.7	4.8
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethylene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	1.5	4.8	5.8
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected



Client Sample ID: VW-8A

Lab ID#: 0907622R1-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080421	Date of Collection: 7/28/09 3:13:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/5/09 12:33 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	Not Detected	8.6	Not Detected
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	3.0	5.5	13
o-Xylene	1.3	1.4	5.5	6.1
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
<u>4-Ethyltoluene</u>	1.3	1.7	6.2	8.2
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	3.4	6.2	17
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: VW-8A Lab Duplicate

Lab ID#: 0907622R1-09AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080424	Date of Collection: 7/28/09 3:13:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/5/09 07:02 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.2	Not Detected
Freon 114	1.3	Not Detected	8.8	Not Detected
Chloromethane	5.1	Not Detected U J	10	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.2	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	4.9	Not Detected
Chloroethane	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	Not Detected	7.1	Not Detected
Ethanol	5.1	Not Detected	9.5	Not Detected
Freon 113	1.3	Not Detected	9.7	Not Detected
1,1-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Acetone	5.1	5.1	12	12
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	1.3	Not Detected	3.9	Not Detected
3-Chloropropene	5.1	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.4	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethylene	1.3	Not Detected	5.0	Not Detected
Hexane	1.3	Not Detected	4.4	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	1.4	3.7	4.1
cis-1,2-Dichloroethene	1.3	Not Detected	5.0	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.7	Not Detected
Chloroform	1.3	Not Detected	6.2	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	5.9	Not Detected
Benzene	1.3	Not Detected	4.0	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.1	Not Detected
Heptane	1.3	Not Detected	5.2	Not Detected
Trichloroethylene	1.3	Not Detected	6.8	Not Detected
1,2-Dichloropropane	1.3	Not Detected	5.8	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.5	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.2	Not Detected
Toluene	1.3	1.3	4.8	4.9
trans-1,3-Dichloropropene	1.3	Not Detected	5.7	Not Detected



Client Sample ID: VW-8A Lab Duplicate

Lab ID#: 0907622R1-09AA

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080424	Date of Collection: 7/28/09 3:13:00 PM		
Dil. Factor:	2.53	Date of Analysis: 8/5/09 07:02 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	6.9	Not Detected
Tetrachloroethene	1.3	Not Detected	8.6	Not Detected
2-Hexanone	5.1	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.7	Not Detected
Chlorobenzene	1.3	Not Detected	5.8	Not Detected
Ethyl Benzene	1.3	Not Detected	5.5	Not Detected
m,p-Xylene	1.3	2.6	5.5	12
o-Xylene	1.3	1.3	5.5	5.6
Styrene	1.3	Not Detected	5.4	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.2	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.7	Not Detected
Propylbenzene	1.3	Not Detected	6.2	Not Detected
<u>4-Ethyltoluene</u>	1.3	1.5	6.2	7.3
1,3,5-Trimethylbenzene	1.3	Not Detected	6.2	Not Detected
1,2,4-Trimethylbenzene	1.3	3.1	6.2	15
1,3-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.5	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.6	Not Detected
1,2,4-Trichlorobenzene	5.1	Not Detected	38	Not Detected
Hexachlorobutadiene	5.1	Not Detected	54	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	104	70-130



Client Sample ID: VW-5A

Lab ID#: 0907622R1-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080426	Date of Collection: 7/28/09 1:50:00 PM		
Dil. Factor:	2.64	Date of Analysis: 8/5/09 12:39 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.5	Not Detected
Freon 114	1.3	Not Detected	9.2	Not Detected
Chloromethane	5.3	Not Detected	11	Not Detected
Vinyl Chloride	1.3	Not Detected	3.4	Not Detected
1,3-Butadiene	1.3	Not Detected	2.9	Not Detected
Bromomethane	1.3	Not Detected	5.1	Not Detected
Chloroethane	1.3	Not Detected	3.5	Not Detected
Freon 11	1.3	Not Detected	7.4	Not Detected
Ethanol	5.3	Not Detected	9.9	Not Detected
Freon 113	1.3	1.5	10	12
1,1-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Acetone	5.3	Not Detected	12	Not Detected
2-Propanol	5.3	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.1	Not Detected
3-Chloropropene	5.3	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.6	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.8	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Hexane	1.3	Not Detected	4.6	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	Not Detected	3.9	Not Detected
cis-1,2-Dichloroethene	1.3	Not Detected	5.2	Not Detected
Tetrahydrofuran	1.3	Not Detected	3.9	Not Detected
Chloroform	1.3	Not Detected	6.4	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Cyclohexane	1.3	Not Detected	4.5	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.3	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.2	Not Detected
Benzene	1.3	Not Detected	4.2	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.3	Not Detected
Heptane	1.3	Not Detected	5.4	Not Detected
Trichloroethene	1.3	Not Detected	7.1	Not Detected
1,2-Dichloropropane	1.3	Not Detected	6.1	Not Detected
1,4-Dioxane	5.3	Not Detected	19	Not Detected
Bromodichloromethane	1.3	Not Detected	8.8	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.4	Not Detected
Toluene	1.3	Not Detected	5.0	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	6.0	Not Detected



Client Sample ID: VW-5A

Lab ID#: 0907622R1-10A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080426	Date of Collection:	7/28/09 1:50:00 PM	
Dil. Factor:	2.64	Date of Analysis:	8/5/09 12:39 AM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.2	Not Detected
Tetrachloroethene	1.3	8.7	9.0	59
2-Hexanone	5.3	Not Detected	22	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	10	Not Detected
Chlorobenzene	1.3	Not Detected	6.1	Not Detected
Ethyl Benzene	1.3	Not Detected	5.7	Not Detected
m,p-Xylene	1.3	Not Detected	5.7	Not Detected
o-Xylene	1.3	Not Detected	5.7	Not Detected
Styrene	1.3	Not Detected	5.6	Not Detected
Bromoform	1.3	Not Detected	14	Not Detected
Cumene	1.3	Not Detected	6.5	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	9.1	Not Detected
Propylbenzene	1.3	Not Detected	6.5	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.5	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.5	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.8	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.9	Not Detected
1,2,4-Trichlorobenzene	5.3	Not Detected	39	Not Detected
Hexachlorobutadiene	5.3	Not Detected	56	Not Detected

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: VW-5C

Lab ID#: 0907622R1-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080422	Date of Collection: 7/28/09 1:50:00 PM		
Dil. Factor:	2.58	Date of Analysis: 8/5/09 05:35 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	1.6	6.4	8.0
Freon 114	1.3	Not Detected	9.0	Not Detected
Chloromethane	5.2	Not Detected U J	11	Not Detected U J
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
1,3-Butadiene	1.3	Not Detected	2.8	Not Detected
Bromomethane	1.3	Not Detected	5.0	Not Detected
Chloroethane	1.3	Not Detected	3.4	Not Detected
Freon 11	1.3	Not Detected	7.2	Not Detected
Ethanol	5.2	Not Detected	9.7	Not Detected
Freon 113	1.3	1.6	9.9	12
1,1-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Acetone	5.2	Not Detected	12	Not Detected
2-Propanol	5.2	Not Detected	13	Not Detected
Carbon Disulfide	1.3	Not Detected	4.0	Not Detected
3-Chloropropene	5.2	Not Detected	16	Not Detected
Methylene Chloride	1.3	Not Detected	4.5	Not Detected
Methyl tert-butyl ether	1.3	Not Detected	4.6	Not Detected
trans-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Hexane	1.3	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	1.3	1.6	3.8	4.8
cis-1,2-Dichloroethene	1.3	Not Detected	5.1	Not Detected
Tetrahydrofuran	1.3	1.9	3.8	5.5
Chloroform	1.3	Not Detected	6.3	Not Detected
1,1,1-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Cyclohexane	1.3	Not Detected	4.4	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.1	Not Detected
2,2,4-Trimethylpentane	1.3	Not Detected	6.0	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Heptane	1.3	Not Detected	5.3	Not Detected
Trichloroethene	1.3	3.2	6.9	17
1,2-Dichloropropane	1.3	Not Detected	6.0	Not Detected
1,4-Dioxane	5.2	Not Detected	18	Not Detected
Bromodichloromethane	1.3	Not Detected	8.6	Not Detected
cis-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected
4-Methyl-2-pentanone	1.3	Not Detected	5.3	Not Detected
Toluene	1.3	Not Detected	4.9	Not Detected
trans-1,3-Dichloropropene	1.3	Not Detected	5.8	Not Detected



Client Sample ID: VW-5C

Lab ID#: 0907622R1-11A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080422	Date of Collection: 7/28/09 1:50:00 PM		
Dil. Factor:	2.58	Date of Analysis: 8/5/09 05:35 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethylene	1.3	51	8.8	350
2-Hexanone	5.2	Not Detected	21	Not Detected
Dibromochloromethane	1.3	Not Detected	11	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	1.3	Not Detected	9.9	Not Detected
Chlorobenzene	1.3	Not Detected	5.9	Not Detected
Ethyl Benzene	1.3	Not Detected	5.6	Not Detected
m,p-Xylene	1.3	Not Detected	5.6	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected
Styrene	1.3	Not Detected	5.5	Not Detected
Bromoform	1.3	Not Detected	13	Not Detected
Cumene	1.3	Not Detected	6.3	Not Detected
1,1,2,2-Tetrachloroethane	1.3	Not Detected	8.8	Not Detected
Propylbenzene	1.3	Not Detected	6.3	Not Detected
<u>4-Ethyltoluene</u>	1.3	Not Detected	6.3	Not Detected
1,3,5-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,2,4-Trimethylbenzene	1.3	Not Detected	6.3	Not Detected
1,3-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,4-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
<u>alpha-Chlorotoluene</u>	1.3	Not Detected	6.7	Not Detected
1,2-Dichlorobenzene	1.3	Not Detected	7.8	Not Detected
1,2,4-Trichlorobenzene	5.2	Not Detected	38	Not Detected
Hexachlorobutadiene	5.2	Not Detected	55	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: 1 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	103	70-130



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080405	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 12:08 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected U J	4.1	Not Detected U J
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethylene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080405	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 12:08 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	102	70-130



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080414	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 03:17 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethylene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080414	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 03:17 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
<u>1,2-Dibromoethane (EDB)</u>	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
<u>4-Ethyltoluene</u>	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
<u>alpha-Chlorotoluene</u>	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	97	70-130



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080404	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 08:22 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	2.0	Not Detected	4.1	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	0.50	Not Detected	1.9	Not Detected
Chloroethane	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Acetone	2.0	Not Detected	4.8	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	0.50	Not Detected	1.7	Not Detected
Methyl tert-butyl ether	0.50	Not Detected	1.8	Not Detected
trans-1,2-Dichloroethylene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.50	Not Detected	1.5	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected



Client Sample ID: Lab Blank

Lab ID#: 0907622R1-12C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080404	Date of Collection: NA		
Dil. Factor:	1.00	Date of Analysis: 8/4/09 08:22 AM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	98	70-130



Client Sample ID: CCV

Lab ID#: 0907622R1-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 10:44 AM

Compound	%Recovery
Freon 12	86
Freon 114	86
Chloromethane	65 Q
Vinyl Chloride	84
1,3-Butadiene	83
Bromomethane	93
Chloroethane	80
Freon 11	85
Ethanol	82
Freon 113	87
1,1-Dichloroethene	86
Acetone	76
2-Propanol	83
Carbon Disulfide	80
3-Chloropropene	84
Methylene Chloride	80
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	85
Hexane	84
1,1-Dichloroethane	82
2-Butanone (Methyl Ethyl Ketone)	84
cis-1,2-Dichloroethene	87
Tetrahydrofuran	79
Chloroform	84
1,1,1-Trichloroethane	87
Cyclohexane	82
Carbon Tetrachloride	88
2,2,4-Trimethylpentane	89
Benzene	81
1,2-Dichloroethane	86
Heptane	85
Trichloroethene	87
1,2-Dichloropropane	85
1,4-Dioxane	81
Bromodichloromethane	92
cis-1,3-Dichloropropene	88
4-Methyl-2-pentanone	86
Toluene	86
trans-1,3-Dichloropropene	87



Client Sample ID: CCV

Lab ID#: 0907622R1-13A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 10:44 AM

Compound	%Recovery
1,1,2-Trichloroethane	87
Tetrachloroethene	84
2-Hexanone	82
Dibromochloromethane	95
<u>1,2-Dibromoethane (EDB)</u>	91
Chlorobenzene	85
Ethyl Benzene	86
m,p-Xylene	86
o-Xylene	87
Styrene	92
Bromoform	98
Cumene	88
1,1,2,2-Tetrachloroethane	87
Propylbenzene	87
<u>4-Ethyltoluene</u>	92
1,3,5-Trimethylbenzene	87
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	84
1,4-Dichlorobenzene	93
<u>alpha-Chlorotoluene</u>	91
1,2-Dichlorobenzene	88
1,2,4-Trichlorobenzene	92
Hexachlorobutadiene	88

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	101	70-130



Client Sample ID: CCV

Lab ID#: 0907622R1-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 05:54 AM

Compound	%Recovery
Freon 12	108
Freon 114	110
Chloromethane	117
Vinyl Chloride	116
1,3-Butadiene	105
Bromomethane	100
Chloroethane	94
Freon 11	108
Ethanol	140 Q
Freon 113	102
1,1-Dichloroethene	100
Acetone	100
2-Propanol	105
Carbon Disulfide	100
3-Chloropropene	98
Methylene Chloride	97
Methyl tert-butyl ether	100
trans-1,2-Dichloroethene	98
Hexane	102
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	109
cis-1,2-Dichloroethene	103
Tetrahydrofuran	117
Chloroform	108
1,1,1-Trichloroethane	108
Cyclohexane	101
Carbon Tetrachloride	108
2,2,4-Trimethylpentane	108
Benzene	105
1,2-Dichloroethane	109
Heptane	110
Trichloroethene	99
1,2-Dichloropropane	107
1,4-Dioxane	96
Bromodichloromethane	102
cis-1,3-Dichloropropene	104
4-Methyl-2-pentanone	117
Toluene	105
trans-1,3-Dichloropropene	108



Client Sample ID: CCV

Lab ID#: 0907622R1-13B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 05:54 AM

Compound	%Recovery
1,1,2-Trichloroethane	96
Tetrachloroethene	98
2-Hexanone	110
Dibromochloromethane	100
<u>1,2-Dibromoethane (EDB)</u>	101
Chlorobenzene	97
Ethyl Benzene	100
m,p-Xylene	100
o-Xylene	99
Styrene	103
Bromoform	104
Cumene	99
1,1,2,2-Tetrachloroethane	99
Propylbenzene	102
<u>4-Ethyltoluene</u>	102
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	99
1,3-Dichlorobenzene	90
1,4-Dichlorobenzene	90
<u>alpha-Chlorotoluene</u>	106
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	73
Hexachlorobutadiene	77

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: CCV

Lab ID#: 0907622R1-13C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 06:57 AM

Compound	%Recovery
Freon 12	103
Freon 114	100
Chloromethane	95
Vinyl Chloride	96
1,3-Butadiene	98
Bromomethane	94
Chloroethane	97
Freon 11	102
Ethanol	87
Freon 113	96
1,1-Dichloroethene	95
Acetone	91
2-Propanol	91
Carbon Disulfide	96
3-Chloropropene	91
Methylene Chloride	94
Methyl tert-butyl ether	106
trans-1,2-Dichloroethene	90
Hexane	95
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	97
cis-1,2-Dichloroethene	91
Tetrahydrofuran	96
Chloroform	96
1,1,1-Trichloroethane	102
Cyclohexane	96
Carbon Tetrachloride	101
2,2,4-Trimethylpentane	95
Benzene	95
1,2-Dichloroethane	99
Heptane	102
Trichloroethene	98
1,2-Dichloropropane	100
1,4-Dioxane	98
Bromodichloromethane	102
cis-1,3-Dichloropropene	102
4-Methyl-2-pentanone	103
Toluene	101
trans-1,3-Dichloropropene	95



Client Sample ID: CCV

Lab ID#: 0907622R1-13C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 06:57 AM

Compound	%Recovery
1,1,2-Trichloroethane	92
Tetrachloroethene	96
2-Hexanone	90
Dibromochloromethane	99
<u>1,2-Dibromoethane (EDB)</u>	96
Chlorobenzene	95
Ethyl Benzene	97
m,p-Xylene	97
o-Xylene	100
Styrene	106
Bromoform	112
Cumene	100
1,1,2,2-Tetrachloroethane	97
Propylbenzene	103
<u>4-Ethyltoluene</u>	94
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	96
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	99
<u>alpha-Chlorotoluene</u>	94
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	95
Hexachlorobutadiene	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	109	70-130



Client Sample ID: LCS

Lab ID#: 0907622R1-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 11:25 AM

Compound	%Recovery
Freon 12	99
Freon 114	99
Chloromethane	74
Vinyl Chloride	97
1,3-Butadiene	96
Bromomethane	110
Chloroethane	94
Freon 11	98
Ethanol	60
Freon 113	113
1,1-Dichloroethene	113
Acetone	101
2-Propanol	95
Carbon Disulfide	96
3-Chloropropene	101
Methylene Chloride	103
Methyl tert-butyl ether	101
trans-1,2-Dichloroethene	101
Hexane	100
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	103
Tetrahydrofuran	95
Chloroform	100
1,1,1-Trichloroethane	102
Cyclohexane	98
Carbon Tetrachloride	104
2,2,4-Trimethylpentane	106
Benzene	95
1,2-Dichloroethane	100
Heptane	99
Trichloroethene	101
1,2-Dichloropropane	98
1,4-Dioxane	94
Bromodichloromethane	107
cis-1,3-Dichloropropene	101
4-Methyl-2-pentanone	99
Toluene	102
trans-1,3-Dichloropropene	101



Client Sample ID: LCS

Lab ID#: 0907622R1-14A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	e080404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 11:25 AM

Compound	%Recovery
1,1,2-Trichloroethane	103
Tetrachloroethene	101
2-Hexanone	88
Dibromochloromethane	111
<u>1,2-Dibromoethane (EDB)</u>	103
Chlorobenzene	97
Ethyl Benzene	98
m,p-Xylene	98
o-Xylene	100
Styrene	103
Bromoform	114
Cumene	100
1,1,2,2-Tetrachloroethane	97
Propylbenzene	99
<u>4-Ethyltoluene</u>	103
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	94
1,4-Dichlorobenzene	102
<u>alpha-Chlorotoluene</u>	104
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	96
Hexachlorobutadiene	96

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	100	70-130



Client Sample ID: LCS

Lab ID#: 0907622R1-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 07:04 AM

Compound	%Recovery
Freon 12	121
Freon 114	114
Chloromethane	132 Q
Vinyl Chloride	117
1,3-Butadiene	108
Bromomethane	110
Chloroethane	100
Freon 11	114
Ethanol	93
Freon 113	122
1,1-Dichloroethene	120
Acetone	114
2-Propanol	112
Carbon Disulfide	109
3-Chloropropene	100
Methylene Chloride	113
Methyl tert-butyl ether	108
trans-1,2-Dichloroethene	107
Hexane	110
1,1-Dichloroethane	113
2-Butanone (Methyl Ethyl Ketone)	111
cis-1,2-Dichloroethene	111
Tetrahydrofuran	124
Chloroform	118
1,1,1-Trichloroethane	115
Cyclohexane	110
Carbon Tetrachloride	106
2,2,4-Trimethylpentane	113
Benzene	115
1,2-Dichloroethane	122
Heptane	120
Trichloroethene	110
1,2-Dichloropropane	117
1,4-Dioxane	105
Bromodichloromethane	111
cis-1,3-Dichloropropene	111
4-Methyl-2-pentanone	120
Toluene	118
trans-1,3-Dichloropropene	114



Client Sample ID: LCS

Lab ID#: 0907622R1-14B

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	s080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 07:04 AM

Compound	%Recovery
1,1,2-Trichloroethane	110
Tetrachloroethene	116
2-Hexanone	113
Dibromochloromethane	113
<u>1,2-Dibromoethane (EDB)</u>	109
Chlorobenzene	111
Ethyl Benzene	113
m,p-Xylene	112
o-Xylene	112
Styrene	112
Bromoform	112
Cumene	113
1,1,2,2-Tetrachloroethane	107
Propylbenzene	117
<u>4-Ethyltoluene</u>	114
1,3,5-Trimethylbenzene	105
1,2,4-Trimethylbenzene	108
1,3-Dichlorobenzene	100
1,4-Dichlorobenzene	97
<u>alpha-Chlorotoluene</u>	105
1,2-Dichlorobenzene	95
1,2,4-Trichlorobenzene	83
Hexachlorobutadiene	99

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	101	70-130



Client Sample ID: LCS

Lab ID#: 0907622R1-14C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 07:33 AM

Compound	%Recovery
Freon 12	91
Freon 114	93
Chloromethane	88
Vinyl Chloride	89
1,3-Butadiene	91
Bromomethane	86
Chloroethane	92
Freon 11	95
Ethanol	63
Freon 113	102
1,1-Dichloroethene	100
Acetone	87
2-Propanol	93
Carbon Disulfide	92
3-Chloropropene	90
Methylene Chloride	97
Methyl tert-butyl ether	105
trans-1,2-Dichloroethene	86
Hexane	91
1,1-Dichloroethane	93
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	90
Tetrahydrofuran	92
Chloroform	93
1,1,1-Trichloroethane	97
Cyclohexane	93
Carbon Tetrachloride	100
2,2,4-Trimethylpentane	89
Benzene	90
1,2-Dichloroethane	96
Heptane	95
Trichloroethene	92
1,2-Dichloropropane	94
1,4-Dioxane	93
Bromodichloromethane	97
cis-1,3-Dichloropropene	96
4-Methyl-2-pentanone	103
Toluene	98
trans-1,3-Dichloropropene	92



Client Sample ID: LCS

Lab ID#: 0907622R1-14C

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	x080403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/09 07:33 AM

Compound	%Recovery
1,1,2-Trichloroethane	88
Tetrachloroethene	93
2-Hexanone	94
Dibromochloromethane	97
<u>1,2-Dibromoethane (EDB)</u>	89
Chlorobenzene	90
Ethyl Benzene	92
m,p-Xylene	92
o-Xylene	97
Styrene	106
Bromoform	109
Cumene	98
1,1,2,2-Tetrachloroethane	94
Propylbenzene	101
<u>4-Ethyltoluene</u>	92
1,3,5-Trimethylbenzene	100
1,2,4-Trimethylbenzene	95
1,3-Dichlorobenzene	97
1,4-Dichlorobenzene	95
<u>alpha-Chlorotoluene</u>	106
1,2-Dichlorobenzene	93
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	93

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	110	70-130



CHAIN-OF-CUSTODY RECORD

Project Manager CHRIS LIEDEK GALE
 Collected by: (Print and Sign) D. SKINNER D. S. McCarthy SMC
 Company GEOSYNTEC Email cgalley@geosyntec.com
 Address _____ City _____ State _____ Zip _____
 Phone _____ Fax _____

Sample Transportation Notice

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180 BLUE RAVINE ROAD, SUITE B
 FOLSOM, CA 95630-4719
 (916) 985-1000 FAX (916) 985-1020

Page ____ of ____

Project Info:		Turn Around Time:	Lab Use Only:
P.O. # _____		<input checked="" type="checkbox"/> Normal	Pressurized by:
Project # <u>SC0233</u>		<input type="checkbox"/> Rush	Date: _____
Project Name <u>Poorty</u>		Pressurization Gas: _____	
		specify <u>N₂ / He</u>	

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum			
						Initial	Final	Receipt	Final (psi)
01A	PVP-1A	3044	7/28/09	7/28/09 11:23	✓ <u>SO261015</u>	27.64	4.21		
02A	PVP-2A	35560	7/28/09	10:14		29.02	3.87		
03A	PVP-4A	36570	7/28/09	14:31		28.78	5.79		
04A	PVP-5	36472	7/28/09	15:25		28.75	3.60		
05A	Q CFB	35686	1:46	prep		-	-		
06A	Q CFB	31769	7/28/09	15:25		28.69	4.38		
07A	VW-3A	36574	7/28/09	10:24		30.0	6.0		
08A	VW-4A	365104	7/28/09	11:27		30.0	3.0		
09A	VW-8A	30818	7/28/09	15:13		30.0	5.0		
10A	VW-5A	35647	7/28/09	13:50		30.2	5.0		

Relinquished by: (signature) Date/Time

D. Skinner 7/28/09 18:03 Received by: (signature) Date/Time

Notes:

Monica Green AIL PEOGX #977 9362 9026

Relinquished by: (signature) Date/Time

D. Skinner 7/29/09 9:20 Received by: (signature) Date/Time

8703 3852 2650

Relinquished by: (signature) Date/Time

Received by: (signature) Date/Time

Lab Use Only	Shipper Name <u>Ted Ex</u>	Air Bill#	Temp (°C)	Condition <u>Not Good</u>	Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> None	Work Order # <u>0907622</u>
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CHAIN-OF-CUSTODY RECORD

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collector, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4222

Project Manager C. G-ALG
Collected by: (Print and Sign) D. Skjernow ~~J. S. McElarting~~ SM
Company GEOSYNTEC Email Cgade@geosyntec.com
Address 10875 R. B. ROAD City SAN DIEGO State CA Zip 92121
Phone 858-674-6559 Fax

Project Info:
P.O. # _____
Project # <u>560237</u>
Project Name <u>Polusy</u>

**180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020**

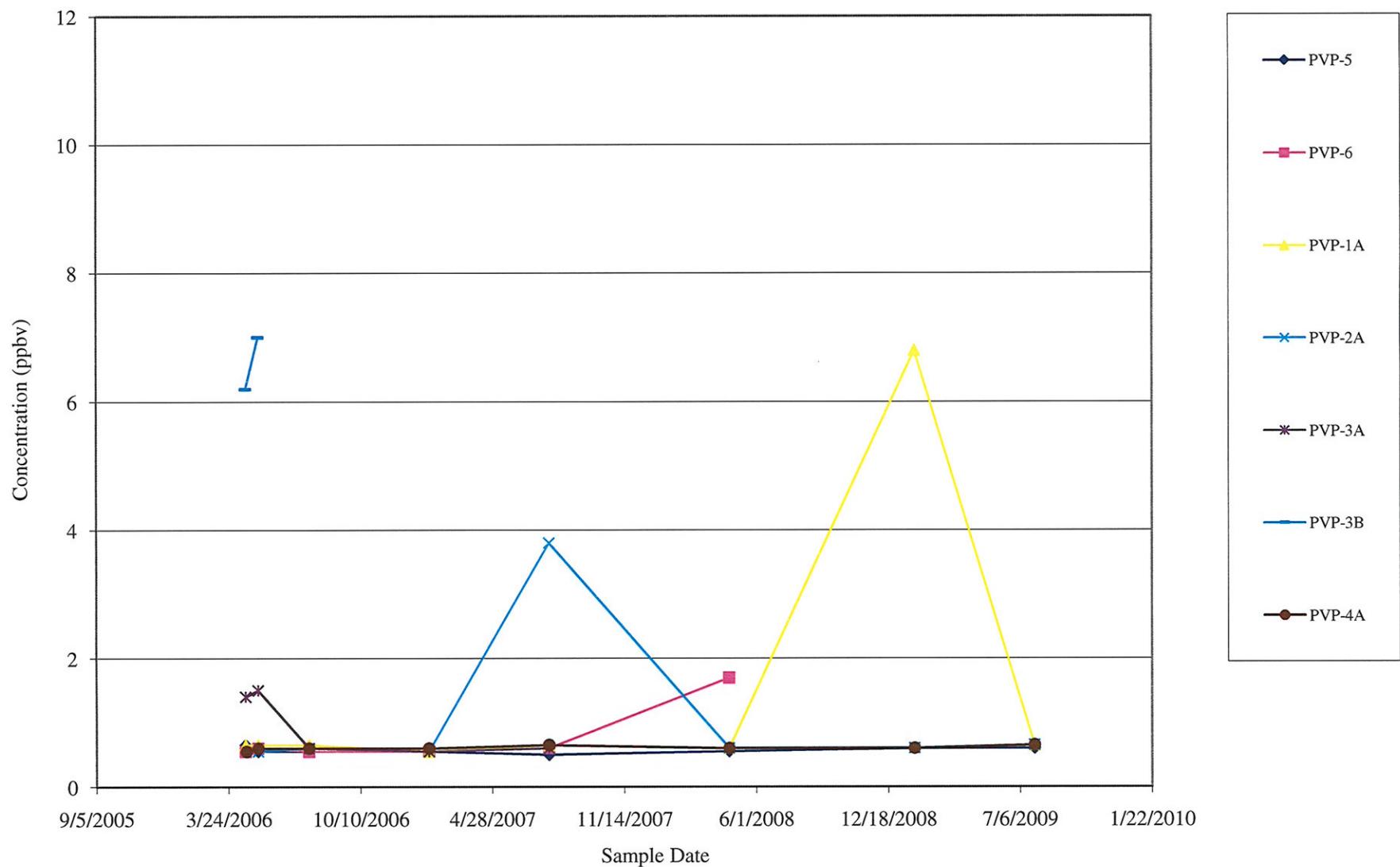
Page _____ of _____

ATTACHMENT D-3

Soil Vapor Time Series Plots

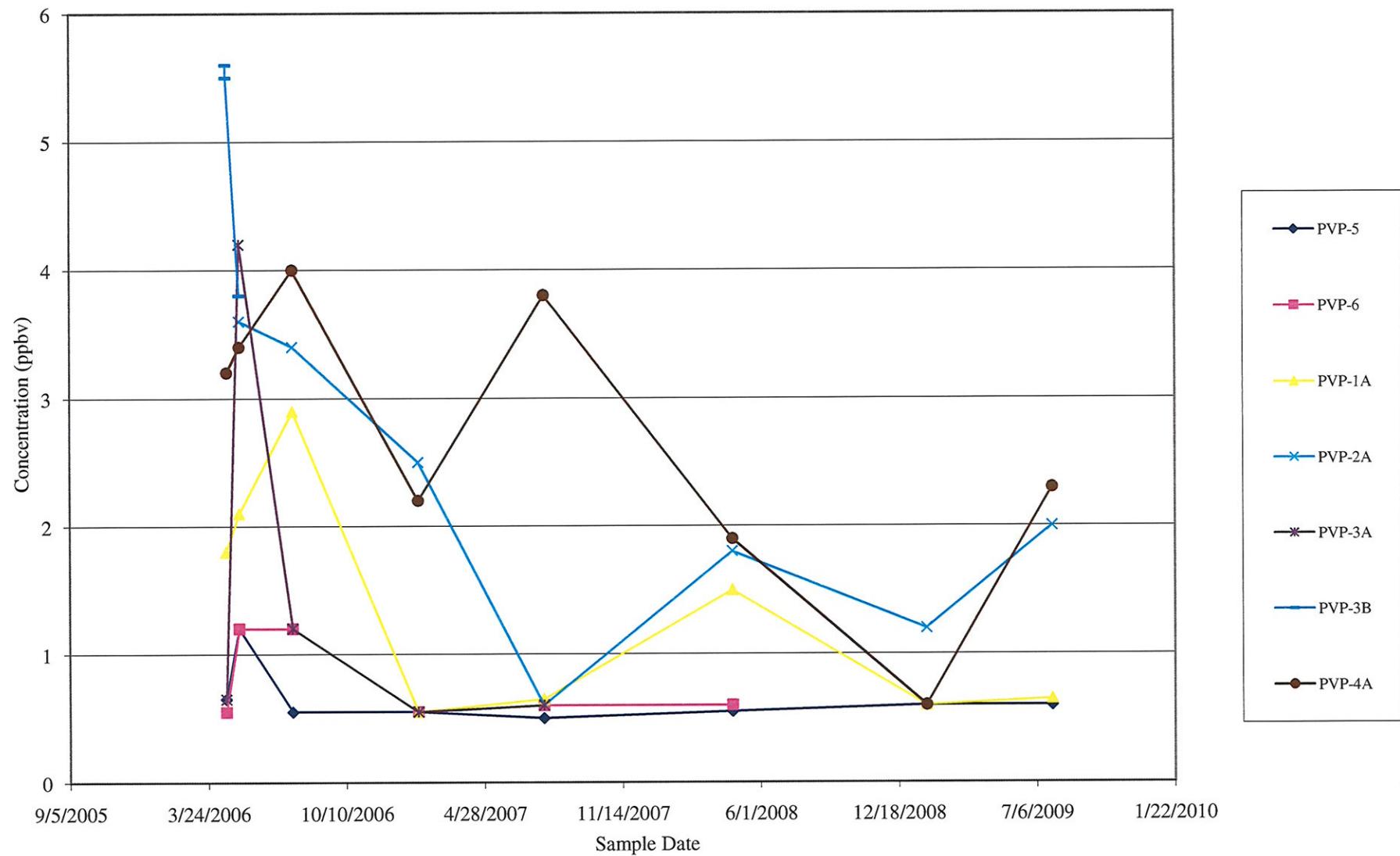
Time-Series Plot for Benzene in Onsite Soil Vapor
Poway Landfill

Geosyntec
consultants



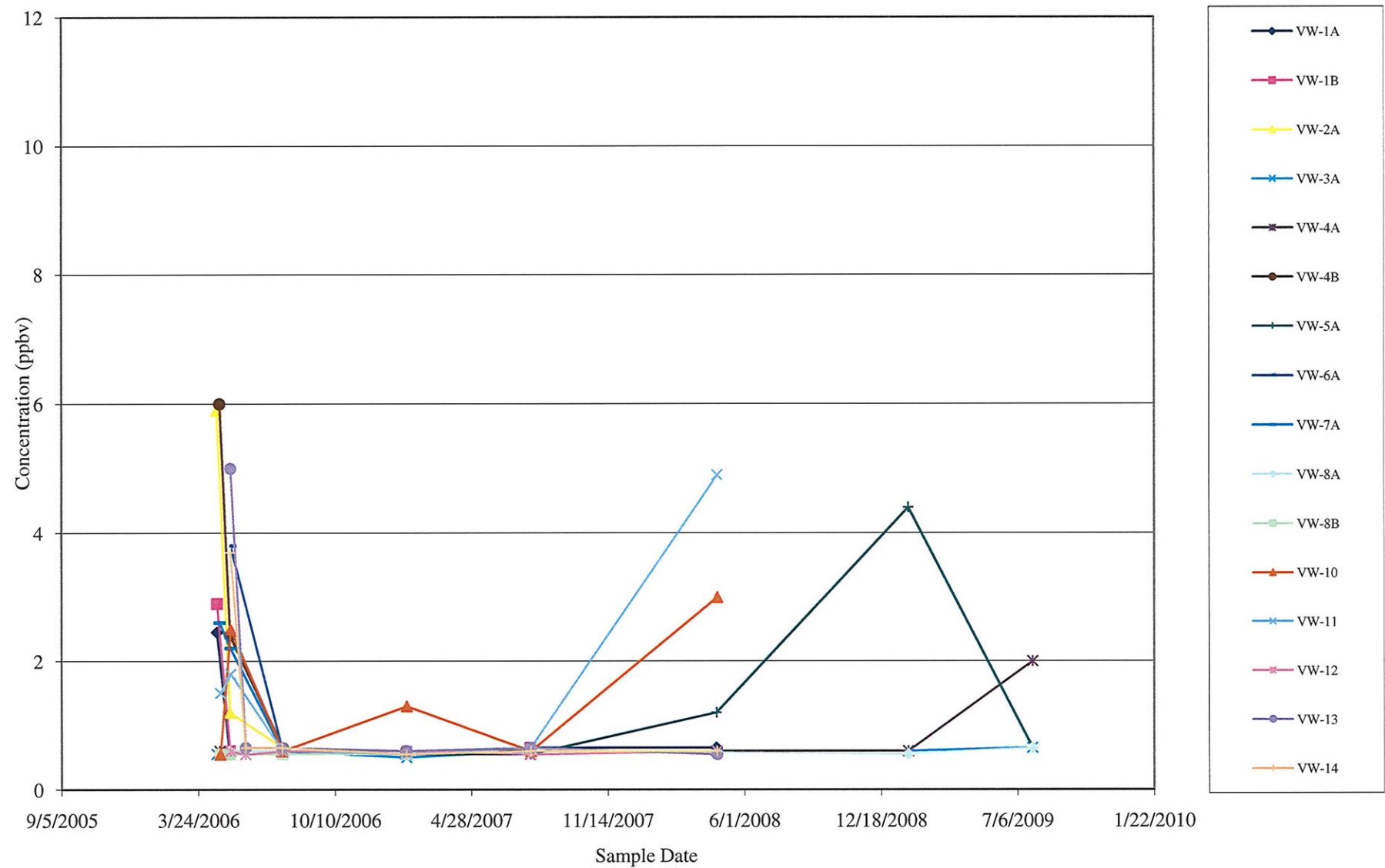
Time-Series Plot for Tetrachloroethene in Onsite Soil Vapor
Poway Landfill

Geosyntec[▷]
consultants



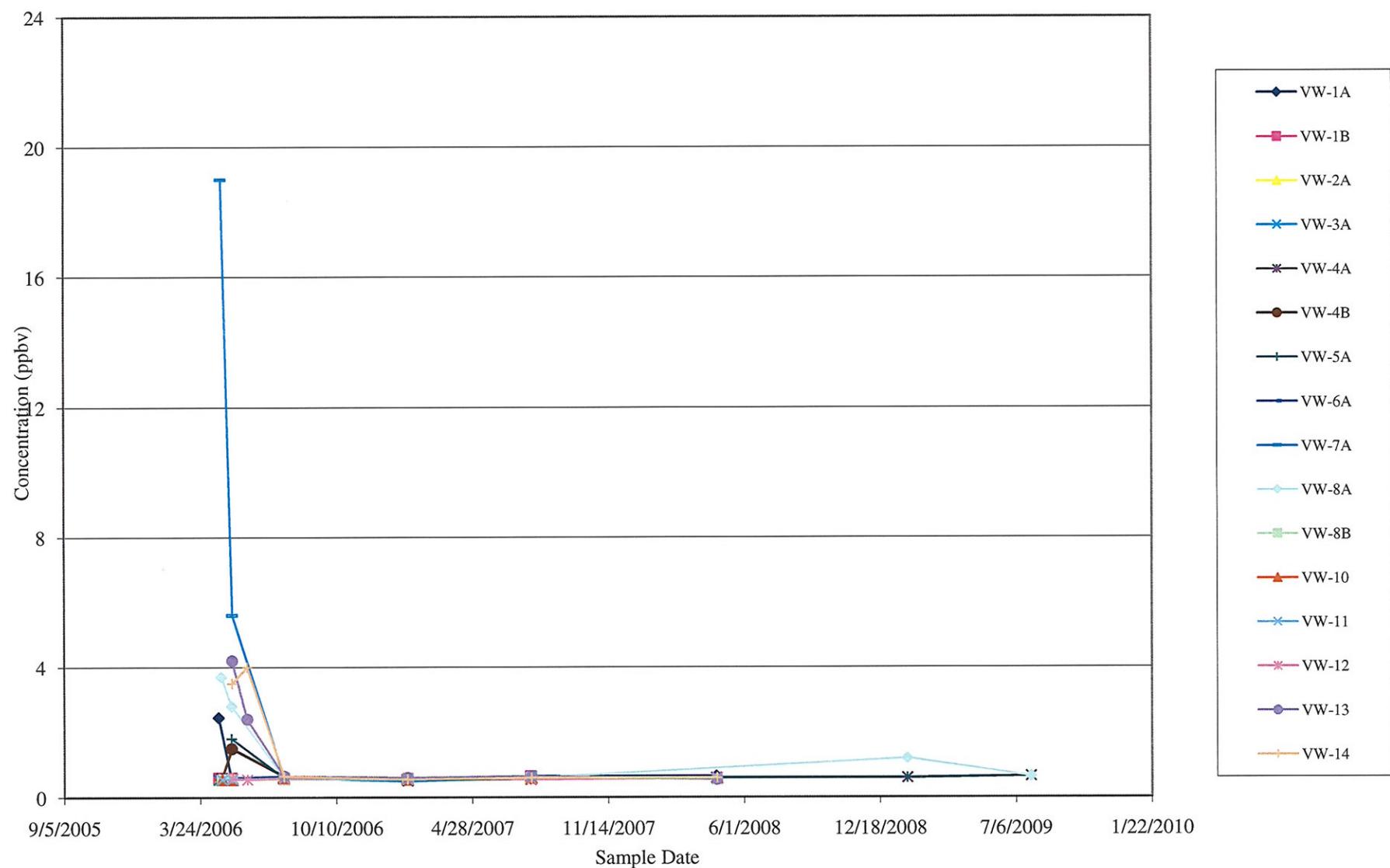
Time-Series Plot of Benzene in Offsite Soil Vapor
Poway Landfill

Geosyntec
consultants



Time-Series Plot for Trichloroethene in Offsite Soil Vapor Poway Landfill

Geosyntec ▶
consultants



Time-Series Plot for Tetrachloroethene in Offsite Soil Vapor Poway Landfill

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consultants

